



Cambridge Market Square
Public Realm Improvement Project

Feasibility Study

BDP.

Cambridge City Council
July 2019

Produced by

BDP.

**urban
flow**



**CAMBRIDGE
CITY COUNCIL**

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1.0 Executive Summary

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1.0 Executive Summary

1.1 Executive Summary

Market Square is at the heart of the city centre. As a consequence, it is an important environment that forms the economic vitality, public life and image of the city as a whole. It is a place where high levels of exchange take place, whether it be commercial, social, cultural or political. It is one of the city's most important public spaces where people spend more time outdoors.

As it is the centre, people travel to, from and through this location by different modes, resulting in significant movement needs. Also, the city's public image is shaped by this space and the quality of the public realm. The beauty, safety and state of repair of this space are very important to its success.

This document illustrates some of the key challenges the future design of Market Square will face and is key to setting a brief for future community engagement and RIBA Stage 02. The document states a series of recommendations for the steps ahead, including alignment with the local plan and planning policies, guidance on future community engagement, physical and logistical site constraints, and a series of high-level design options which can inform the potential vision for Market Square.

1.2 Methodology

At this stage the nature of the study is high level, with a 'light touch' approach in terms of investigative analysis – sufficient to reveal key issues, challenges and opportunities that would inform the development of some conceptual approaches to public realm improvements, but without incurring the significant cost associated with detailed technical surveys that would normally be undertaken in advance of a detailed design for a particular public realm scheme.

As such, for the purpose of this study, detailed investigative surveys (e.g. utility, condition, parking) have not been undertaken. Topographical survey information and C2 utility information has been supplied by Cambridge City Council and a supplementary detailed utility subterranean survey is recommended for RIBA Stage 02/03. The approach at this point has been orientated towards on-site visual appraisal, desktop studies and making use of current survey data and studies from other sources, if available. In addition, anecdotal information has been recorded through a day workshop session with technical stakeholders. This session was used to underpin the key findings which emerged from the desktop study.

The Concept Feasibility Study presents a series of possible public realm illustrative concepts and approaches to space and movement design. These are not intended as particular design proposals in themselves, but rather as a means of exploring possibilities and feasibility challenges, the context for setting the vision and ambition for the square, and as a means of setting the brief for the RIBA Stage 02 concept design. Conclusions

from this feasibility study will highlight any holes in the existing data sets, providing a series of recommendations for further survey information that will underpin the forthcoming RIBA Stage 02 concept design.

The study is structured as follows:

- Introduction;
- Context: Reviews the past and current context for Market Square;
- The square today: Analysis diagrams which are the result of desktop studies and technical workshops;
- Key constraints – summary diagrams: Outlines some Key Challenges and Opportunities;
- Market needs assessment: Presents the current requirements and future considerations for the market;
- Opportunities and illustrative concepts: Presents the potential approaches and Concept Scenarios;
- Financial viability assessment: Financial assessment of each potential scenario;
- Recommendations and conclusions.

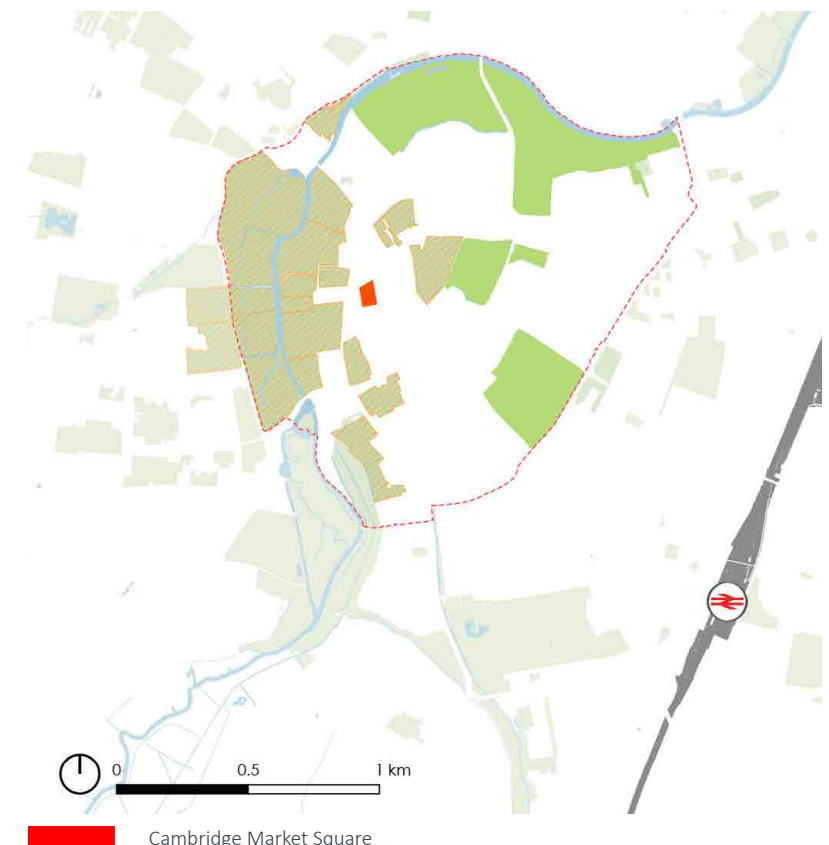
1.3 Key Conclusions & Recommendations

The public realm within Market Square is challenged by the operations of the existing market and encompassing carriageway. This restricts the usable space for landscape and public realm features. Spaces for activity to occur, and resting points for people to dwell within, are key elements of good city spaces and elements missing from Market Square today. The importance of the existing market cannot be understated, both in a historical context and in the identity of Cambridge today, however the resulting movement functions servicing this market dominate what little space there is available for the square to diversify its use.

Many of these movement functions have been harmed, either by attempts to protect the sense of place through eliminating or restricting access and movement that made the place what it is, or by too much emphasis on enabling traffic to move across it as easily as possible. There is barely a single movement function that the space may not need to accommodate, which represents a considerable challenge to the design. But it is a challenge that must be met if Market Square is to continue to flourish.

It is also recognised that historical features such as the Grade II listed fountain are not celebrated and that current facilities for market traders are in need of improvement. A phased series of improvements to resolve these issues could be placed into action relatively swiftly if the current market space was to remain to its current configuration. One which seeks to improve existing market conditions and address existing safety concerns. However, how these works are perceived by the public will be determined by both the final outcome, and the process undertaken to achieve it; resurfacing the square to its current layout would still hold significant construction costs whilst not addressing some of the current issues regarding space and placemaking or future aspirations likely expressed by key stakeholders and the local community. Combining the works required within a bolder vision for the space is a clear opportunity, particularly if the final outcome is to align with local policy and the emerging SPD.

It is therefore imperative that a clear vision is set for the square which is in line with the aspirations of Cambridge's residents and businesses. This vision should set the level of ambition for the change the Market Square designs should strive to achieve, be based upon community led engagement, have an understanding of the key challenges the vision would face through its implementation, and have an understanding of the key challenges the vision would face through its implementation, including where the required capital investment will come from – some of which is outlined within this document.



1.0 Executive Summary

Study area



- Cambridge City Centre boundary
- Cambridge Market Square



2.0

Introduction

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2.2 Context

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2.0 Introduction

2.1 Introduction

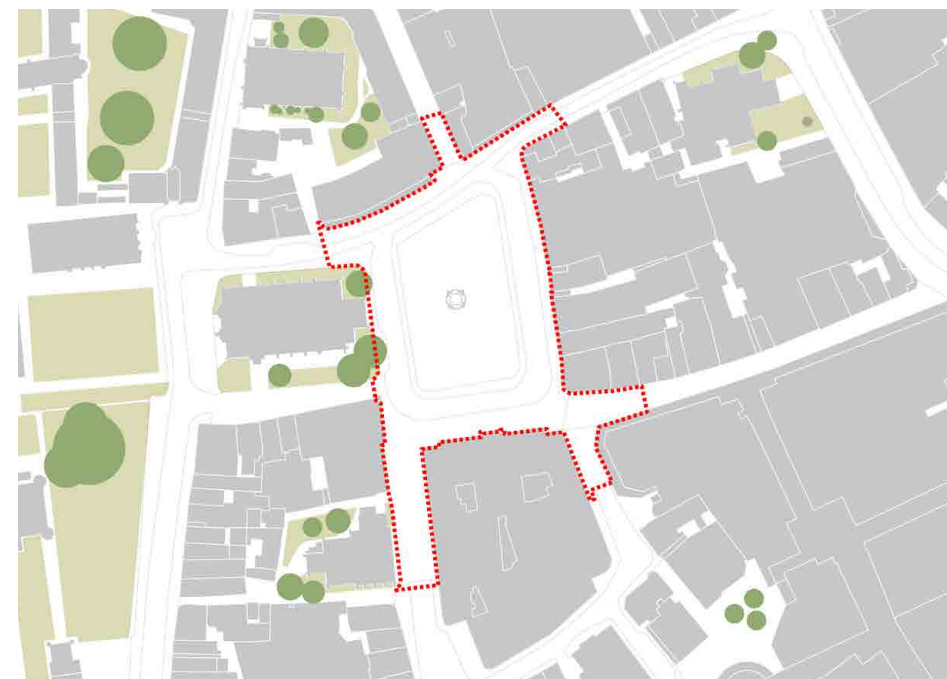
This study has been prepared on behalf of Cambridge City Council (CCC) as the local planning authority and owner of non highway land within the Market Square, and in partnership with the Greater Cambridge Partnership (GCP) and Cambridgeshire County Council (the County) as the public highways authority. The study presents the analysis and findings of a Concept Feasibility Study that explores the potential for enhancing the Market Square within Cambridge City Centre and its surrounding streets. The design for the Market Square is to align with the emerging "Making Space for People" Supplementary Planning Document (SPD).

Project deliverables for the Market Square have been split into two phases of work, RIBA Stages 01 and 02. This study represents the completion of RIBA Stage 01.

Project Phases;

RIBA Stage 01 – Feasibility – Desktop study of available evidence and data, including coordination with technical specialists and city council officers.

RIBA Stage 02 – Concept – Stakeholder engagement meetings, workshops and engagement analysis. Specification of further survey work and analysis of results. Development of vision and RIBA Stage 02 concept design.



Study Area boundary

2.2 Context

Cambridge as a city is characterised by its prestigious university, medieval streets and open spaces. The city's compact form and flat topography has contributed to it becoming the best known cycling city in the UK. Market Square is one of the few paved public spaces in the centre of Cambridge and as such it plays both a functional and a civic role for the city. The square is synonymous with the daily market and the operational requirements of this are an evident restriction to its civic role as a key public space. Centrally located within the market is a Grade II listed fountain.

Located in the centre of the historic core, Market Square is served by St Mary's Street and Market Street to the north, St Mary's Passage in the west, Peas Hill and Guildhall Street in the south and Petty Cury to the west. Market Hill encircles the central market space and is primarily used for vehicular access to the market place. The significant public space of Kings Parade is located to the west of the square and is connected by St Mary's Street and St Mary's Passage. Significant buildings around the Market Square include Great Saint Mary's Church to the west and the Guildhall to the south. A more recent addition to the surrounding cityscape is the Grand Arcade retail development which was completed in 2008. The Grand Arcade provides parking facilities for the historic core of Cambridge.

Market Square, and more broadly the historic core, is under significant pressure due to the growth and popularity of Cambridge as a city. In 2016 Cambridge's population was estimated as 131,800, whilst the wider Cambridge area (including the city and the South Cambridgeshire district) has an estimated population of 265,000. Current plans indicate further population growth through a proposal for 14,000 new homes to be built in the city by 2031 (Cambridge City Council), and coupled with a projected growth in Cambridge's commuter numbers and tourism, a 48% growth in visitor numbers between 2010 and 2013 (Cambridge Economic Impact of Tourism Report 2013) means that the continued growth of Cambridge poses a significant risk to the character and usability of the historic core and specifically Market Square.

More recent figures show that the number of day trips to Cambridge in 2017, which offer low economical value to the businesses of the city, stood at 7,137,000. This represents a 6.6% yearly increase (Cambridge Economic Impact of Tourism Report 2017). Overnight trip numbers stood at 949,400 in 2017, which represents a 4.5% yearly increase. This annual increase is a continuing trend which the city of Cambridge is having to manage.

2.3 Relationship with the SPD

The Market Square feasibility study is the first phase in the process towards a RIBA Stage 02 design for the space. The RIBA Stage 02 design will be influenced by the emerging Supplementary Planning Document, Making Space for People, which will be an adopted strategy specifically focused around the city centre area. The Market Square Stage 02 design will be a case study of the SPD in action.

The SPD is being undertaken by Cambridge City Council (CCC) as the local planning authority, in partnership with Cambridgeshire County Council (the County) and the Greater Cambridge Partnership (GCP). The draft Making Space for People SPD will be prepared in accordance with the National Planning Policy Framework (NPPF) (2018) and Regulations 11 to 16 (Local Planning) of the Town and Country Planning (England) Regulations 2012. The SPD will give effect to Policy 10 'The City Centre' of the Cambridge 2018 Local Plan, providing a strategy for management and guiding the design of public realm and movement improvements. Once adopted, the SPD will be a material consideration in assessing planning applications within the site area boundary.

2.4 Surrounding Initiatives

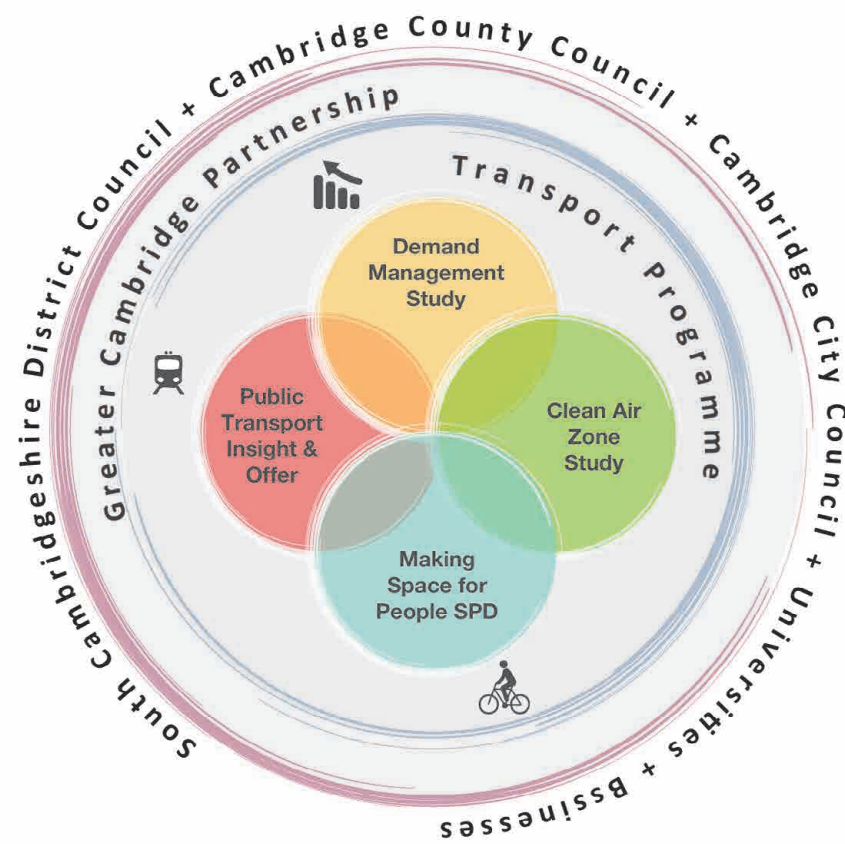
The Greater Cambridge Partnership (GCP) is a consortium of public sector partners that work together to deliver infrastructure projects across the Greater Cambridge area. Specifically the Transport Programme aims to develop a comprehensive and sustainable transport network across Greater Cambridge to accommodate the city's growth.

The GCP's City Access strategy is currently developing solutions that address the primary issues of congestion and mobility across the city, with the aim of achieving a reduction in peak-time traffic levels in Cambridge by 10-15% by 2031. The strategy looks to propose and deliver a series of measures through four primary documents: the Demand Management Study, the Clean Air Zone Study, the Public Transport Insight and Offer and the City Centre Spaces and Movement Strategy (now known as the Making Space for People SPD). Once adopted, the SPD will guide city centre infrastructure investment, whilst working in tandem with the other three City Access Projects. Market Square and the Streetscape Manual are two sub-projects which sit underneath the SPD. The conclusions and recommendations set out in all umbrella strategies will directly influence the proposals for Market Square and help determine any planning submissions for the square's potential redesign.

2.0 Introduction

In addition the Cambridgeshire and Peterborough Combined Authority's CamMetro vision for the City of Cambridge, which proposes a tunnelled metro system, must be recognised and considered with any future proposals for Market Square. This CamMetro system will offer a public transport option into central Cambridge and the rest of the metro network within the district.

These projects provide a positive opportunity for Market Square to advance against a holistic strategy which is grounded in robust evidence and policy, providing the context for stakeholders' aspirations to set against, and a basis for a clear vision to see significant, long-lasting public realm improvements to the area.



2.5 Regulations

The section presents an overview of the origins of the current governance arrangements for Market Square. Whilst based upon some legislative sources, it does not purport to be a formal legal interpretation and should not be regarded as such. Should further investigation of the meaning of the legal context be of interest, an opinion from those with the relevant expertise should be sought.

Cambridge City Council (CCC) is the freehold registered proprietor of the land which currently holds the daily market, registry title number CB287332. Market Hill, as a public highway, is under the jurisdiction of Cambridgeshire County Council (County). The City Council pays a fixed £70 per annum fee to Downing College in respect of a Royal Charter dating back to 1382, however there exists no restrictions on the title against using the land for a particular purpose.

Cambridge has traditionally been an important market centre. The origins of the current market arrangements have not stemmed from a grant of charter. Instead a market in Cambridge was established simply by local need and custom (British-history.ac.uk). Early ordinances start to regulate the use of the square as a market place. Ordinances from 1347 make reference to forbidding certain items from being sold outside of market days, and an ordinance in 1377 laid down the location of the various stalls or tables within the market, with Peas Hill indicated as a fish market which was kept in place until 1949. Today Market Square holds Charter Market Regulations which the City Council has set out for traders.

Regulations are in place governing the use of Market Square by traders through the Charter Market Regulations set by the City Council. Whilst these regulations do not directly control the design of Market Square they do outline the restrictions for vehicle use, refuse, maintenance, advertisement and the operational hours of the market, all of which will hold influence over any future designs for the space. These restrictions will need to be considered when/if a future design of Market Square is to be taken forward. A more detailed review of the operational requirements of the market is set out in section 5.

In addition the Cambridge City Council Street Trading Policy 2012 sets out which city centre streets can lawfully hold on-street trading. This is in accordance with the current byelaws. The streets surrounding Market Square where trading is currently consented include Guildhall Street, Market Street, Peas Hill, St Mary's Passage and Sidney Street. Prohibited streets include All Saints Passage, Bene't Street, Corn Exchange Street, Kings Parade, Market Hill, Petty Cury, Rose Crescent, St Mary's Street and Senate House Hill.

Regarding design parameters, restrictions exist through the Historic Core Appraisal and the Historic Core Conservation Area Management Plan, 2018. Within the Historic Core Appraisal, Market Hill is signified as an area of 'High Significance'. As such the Conservation Area Management Plan outlines a series of guidelines for the design and maintenance of Market Square in accordance with this 'High Significance' status. This includes the preservation of the historic street patterns, the reinstatement of historic materials and the use of traditional building materials. The document also identifies that any proposals for the square need to hold an appreciation of the prevailing scale of the existing historical buildings, as well as the need to enhance or maintain views of citywide or local landmarks. As such, any proposals for Market Square will need to acknowledge these guidelines, or if breaching them, clearly outline 'where there is a clear public benefit in doing so'.

In conclusion, it would appear from this initial review that:

- The Market and subsequent origins of its regulation pre-dates the University and stems from Norman origins.
- Current governance of the market is controlled by the City Council through their Charter Market Regulations.
- Guidelines for the design and heritage aspects of the square are provided by the Historic Core Appraisal and Conservation Area Management Plan.
- The potential to introduce public realm improvements is not inhibited by any of the aforementioned documents, however clear guidelines are in place.
- The emerging city centre SPD, Making Space For People, will influence future design proposals through its proposed Streetscape Manual.
- A more comprehensive review of the legislative framework may be required, subject to the detailed nature of any subsequent design proposals that may be suggested in the future.



2.6 Planning Policy Context

This section presents the planning policy context set out within the current Cambridge Local Plan and related policies. This is a high level review and it is recognised that a more detailed and comprehensive review of the policy context will be required moving forward. The main purpose of this section is to present the relevant planning policy designations particular to Market Square.

National Planning Policy Framework NPPF, 2018

Policy 125: States that plans must set out a clear design vision and expectations to ensure quality of place. These policies must be developed with the local community to ensure they reflect local aspirations.

Policy 127: Planning policies and decisions should ensure that developments:

- Will function well and add to the overall quality of the area, not just for the short-term but over the lifetime of the development.
- Are visually attractive as a result of good architecture, layout and appropriate and effective landscaping; are sympathetic to local character and history, including the surrounding built environment and landscape setting, while not preventing or discouraging appropriate innovation or change.
- Establish or maintain a strong sense of place, using the arrangement of streets, spaces, building types and materials to create attractive, welcoming and distinctive places to live, work and visit.
- Optimise the potential of the site to accommodate and sustain an appropriate amount and mix of development (including green and other public space) and support local facilities and transport networks.
- Create places that are safe, inclusive and accessible and which promote health and wellbeing, with a high standard of amenity for existing and future users.

Cambridge Local Plan 2018

The Cambridge Local Plan sets out the planning framework to guide future development for the city until 2031. This document also outlines the city's vision for the future and the proposed set of objectives. At the heart of these objectives is the attainment of a high quality environment with outstanding sustainable movement.

Some of the key points outlined in the spatial vision for Cambridge in the Local Plan can be summarised by the following bullet points:

- A world-class city that is compact, dynamic and has a thriving city centre.
- A more environmentally sustainable and successful low-carbon economy.
- A continuing leader in higher education and research.

- A city with a range of good quality housing.
- A city that encourages innovation and design excellence, contributing positively to Cambridge's distinctive identity.
- A city where green spaces, infrastructure and the River Cam are protected, enhanced and grown.
- A city that protects its heritage.
- An uncongested and clean city where sustainable transport is the norm.
- A city that creates community and enjoys an enviable quality of life, where residents have a voice.
- A city that is inclusive for all, combining prosperity, affordability, health, safety and a good social mix.
- A city served by successful and easily accessible local centres, offering a choice of shopping services and community facilities.

Policy 10: The City Centre - outlines the intended role of the city centre as a multi-functional regional centre which looks to encourage development that adds vitality, viability and diversity, whilst preserving heritage assets, delivering high-quality design and promoting modes of sustainable transport. The policy also identifies the need for a public realm SPD (Making Space for People) to set out a coherent strategy for improvement to the capacity, quality and connectivity of the city centre's public streets and spaces. Direct reference is made to the need to improve the public realm around Market Square, in order to enhance its role as the city's primary civic space.

Policy 55: Responding to Context - supports development which positively responds to its context and draws inspiration from the key characteristics of its surroundings. The development should enable the creation of distinctive and high-quality places across the city.

Policy 56: Creating Successful Places - outlines that the design of a development should be attractive, high-quality, accessible, inclusive and safe. Streets must be designed to respond to their level of use, whilst preventing domination by vehicular traffic. The policy also states the need for attractive places of appropriate scale that are inclusive and provide natural surveillance. Public spaces and the public realm must respond to context, be safe and usable, have active edges, provide amenities and be enjoyable to use. Materials, finishes and street furniture must be appropriate to the location.

Policy 59: Designing Landscape and the Public Realm - this must be approached holistically with its local context. The design must consider the needs of all users and adopt the principles of inclusive design. Materials must be of a high quality and respond to the context to help create local distinctiveness. An integrated approach should be taken to surface water management as part of the overall design. Trees and

other planting is to be incorporated ensuring they are appropriate to both the scale of the buildings and the space available. Existing features, including trees, natural habitats, boundary treatments and historic street furniture and/or surfaces that positively contribute to the quality and character of an area, should be retained and protected.

The Statement of Community Involvement (SCI) places importance on the role of community-led design, which should reflect and respond to the historical context of Market Square. Designs must be well considered and distinctive, whilst laid out in a functional way. A high level of detailing and materials must be tailored to the circumstances of the square and provide longevity, with the space being designed to be safe and usable for all which promotes the health and wellbeing of its users.

Vision of Cambridge 2065

A collaborative report published in 2015 brings together reviews by the City Council, Cambridge University, local businesses and interest groups outlining their future vision for Cambridge. The summary concludes:

..."the authors see Cambridge in 2065 as a city that is green and connected. Cambridge is seen as both a global leader and a local hub for high-tech innovation, culture and also communities. The very high quality of life associated with the city has been maintained and developed, providing a recreational and cultural match to its continuing intellectual and economic growth. Above all, Cambridge is viewed as a beautiful city that attracts people from all over the world and whose citizens can live healthy, happy and equal lives."

The Local Plan and the Vision of Cambridge 2065 are set to guide and inform the objectives and principles set out in the Making Space for People SPD, and subsequently inform and guide the vision for Market Square.

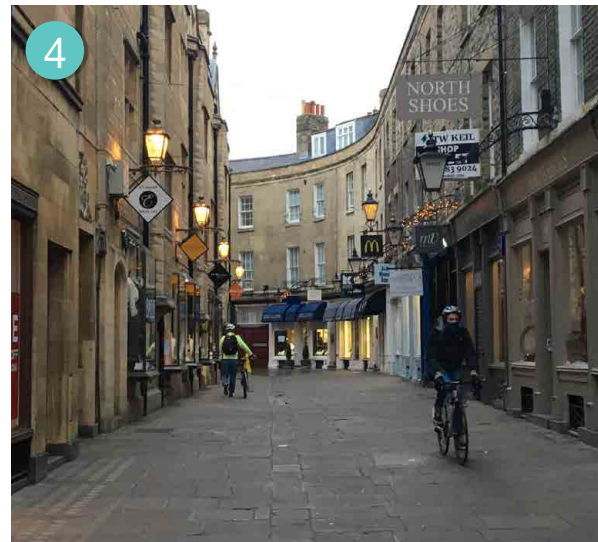
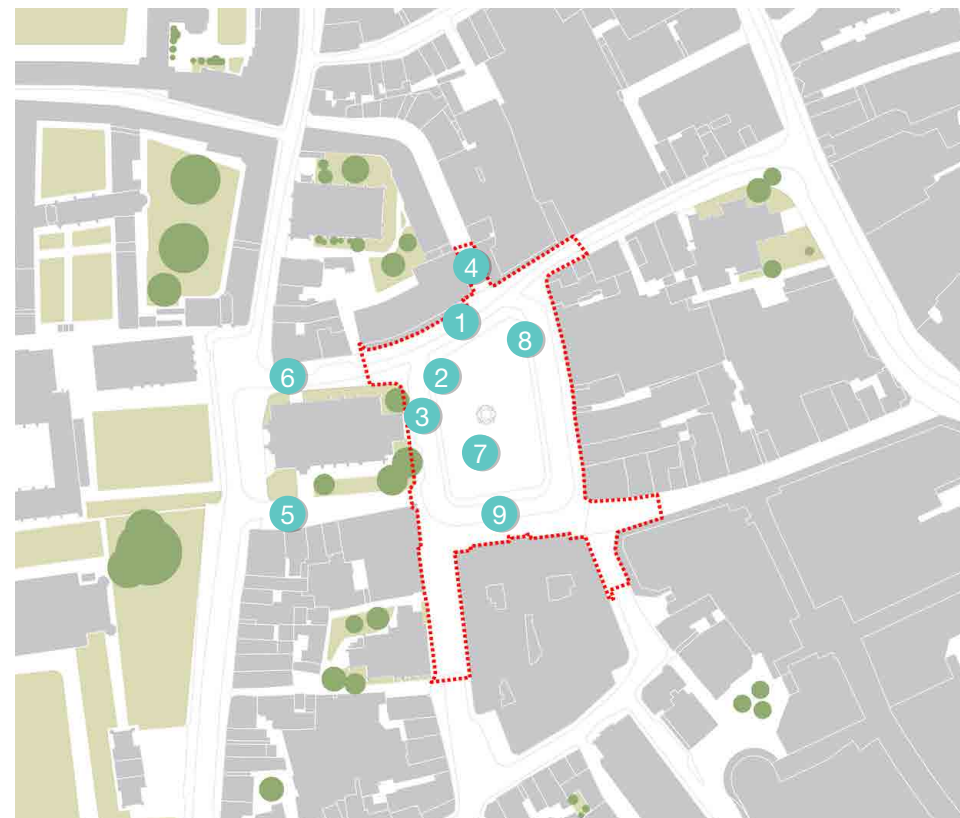
2.0 Introduction

2.7 Study Area

Cambridge Market Square is located at the heart of Cambridge City Centre, a few yards east of King's Parade and in close proximity to the Backs and the Colleges. The area offers a mix of retail, commercial and residential uses with prominent historic and civic buildings distributed within. It is a significant zone of employment as well as a key tourist attraction. The square is considered the main civic space of the city and is well visited for its daily market, attracting tourists, retailers and locals.

Defined on its northern edge by St Mary's Street (1) and the entrance to Rose Crescent (4), and on its eastern edge by Market Hill (11), the Guildhall forms the southern frontage of the square (9), bordered by Peas Hill (14) and Petty Cury (18). The western frontage of the square is defined by the facade of the Church of St Mary the Great (3) and St Mary's Passage (5).

Key views



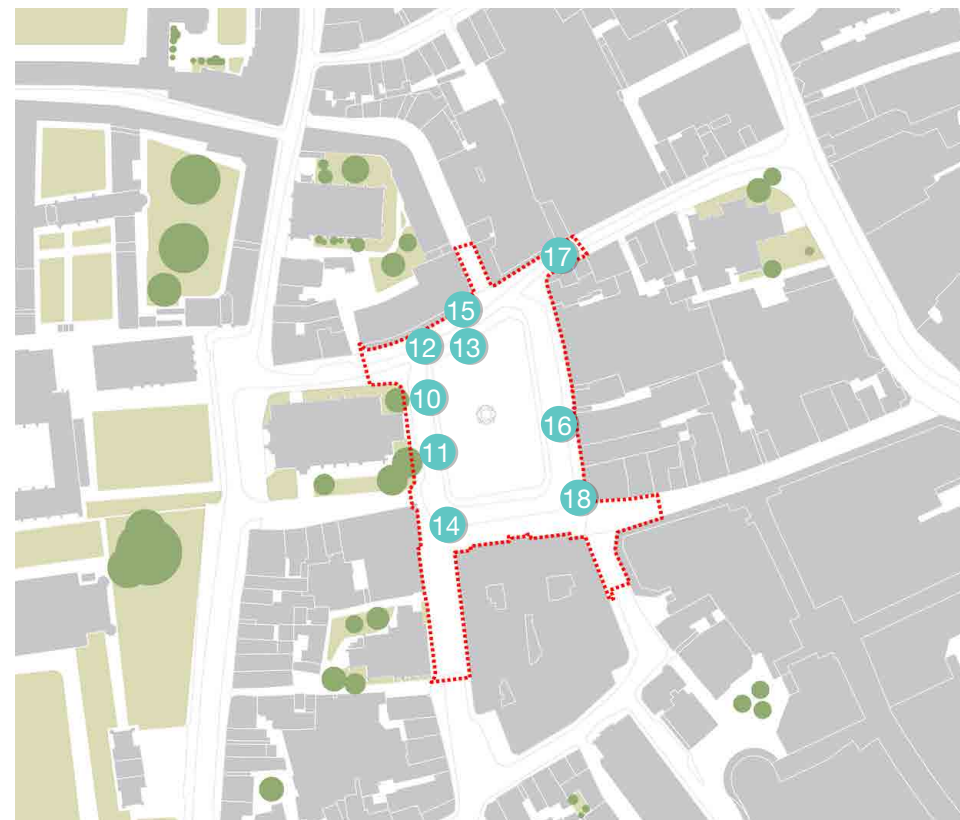
2.0 Introduction

2.7 Study Area

This page shows images taken along the surrounding streets of Market Square. These images indicate key routes and views to and from the square.



Key views



3.0

Context

- 3.1 Cambridge Market Square: Changes Over Time
 - 3.2 The Fountains: Landmarks of Market Square Through Time
 - 3.3 Observations on Public Realm
 - 3.4 Key Dimensions
 - 3.5 Comparable Squares
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3.0 Context

3.1 Cambridge Market Square: Changes Over Time

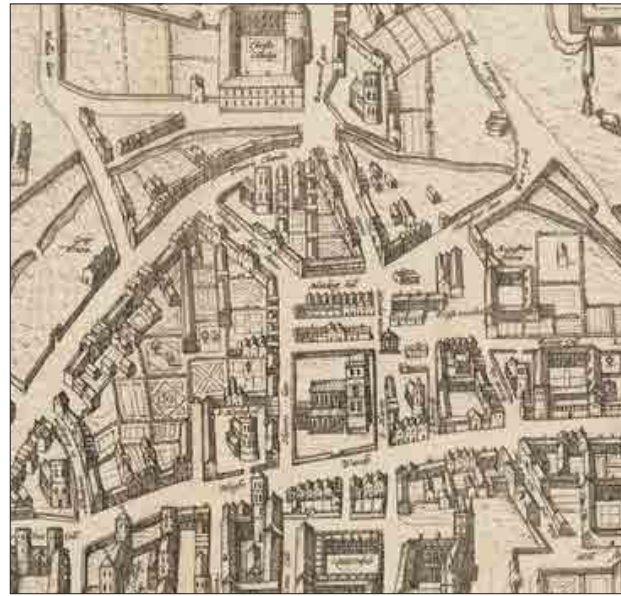
The Cambridge market was founded in Saxon times and continued to grow through to the Middle Ages. As an important trading hub, largely due to the River Cam, Cambridge was an important centre for East Anglia. Stourbridge Fair, which became one of the biggest fairs in England, was located on the banks of the River Cam due to its strategic location, being accessible by river and by being close to the city. The legacy of the market and the Guildhall stems from this growth in trade, which principally emerged through local need and custom. In 1201, through Royal Charter, Cambridge's Guild Merchant was confirmed and in 1207 the Charter of King John granted Cambridge the right to elect a mayor, giving Cambridge relative independence for trade and control of goods.

Various items were sold in the market, such as fruit and vegetables, fish, fabric and hot food, and this market trading is still the same today. Streets were often named after the goods that were sold there, for example "Peas Hill", 'Peas' is a corruption of the Latin 'pisces', meaning fish.

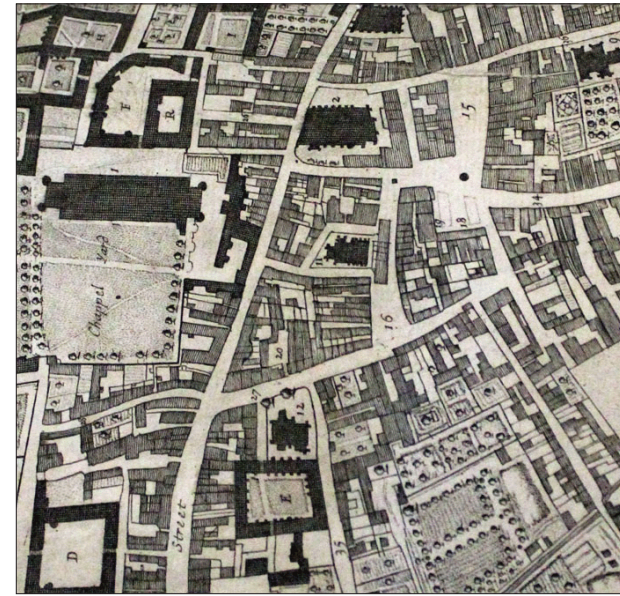
The market was an important place for the Jewish community in the 1100s, who had dwellings located where the Guildhall is now, and importantly had a Synagogue on this site where they lived and worked. The Edict of Expulsion issued by King Edward I in July 1290 expelled Jewish people from the Kingdom of England, resulting in a significant change to Market Square. The site became a Tollbooth and a Gaol for the market traders, after which a building was erected for the Council that is the Guildhall today.

Due to the importance of the market almost all of the town's most significant civic buildings were located around the square. These included Great St Mary's Church, the Guildhall and the Gaol. The market was now the centre of the city, becoming a space of trading, civic uses, announcements and justice. Queen Mary I ordered that the leading Protestants of Cambridge be burnt at the stake in the marketplace.

Before 1849, due to the street pattern of the day, Cambridge market was orientated in an L-shape stretching from Petty Cury to the northern end of Peas Hill. This was due to two rows of terraces, running north to south, being located where the market stands today. By 1688 these terraces had evolved into more developed city blocks and this evolution can be seen in the 1575 and 1688 maps of the area. In 1849 the 'Great Fire of Cambridge' resulted in many of these surrounding buildings becoming damaged or destroyed, the legacy of which is the configuration of space seen today.



1575, Extract from Brown Hogenberg map



1688, Extract from David Loggan map
Map of Cambridge with the previous Market Place layout and the first fountain location resulting from the Hobson's Conduit.



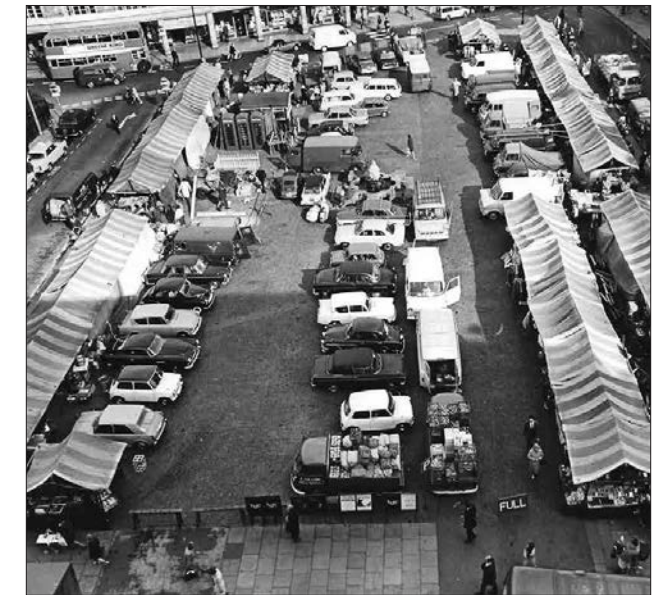
1841, Frederick Mackenzie
Illustration of the market with the Hobson's Conduit.
View from the eastern side of Market Place.



1905, Historic photograph of the Market Place and the current fountain with its original stone canopy. View from the Guildhall.



1921, Historic photograph of the Market Place free of stalls. The image show the current fountain with its original stone canopy.



1960, Historic photograph of the Market Place where stalls and vehicles were part of the market landscape. View from the Guildhall.

3.0 Context

3.2 The Fountains: Landmarks of Market Square Through Time

The Hobson's Conduit was also known as Hobson's River and Cambridge New River. In the 16th and 17th Centuries increasing numbers of students and university staff were dying of plague due to the city's uncleanness. The Master of Peterhouse, Andrew Perne, first suggested in 1574 the idea of taking fresh water from Nine Wells to clean out the King's Ditch on the southern and eastern edges of town. In early 1600 Hobson donated money for a conduit to bring fresh water from Trumpington to a fountain built to provide clean drinking water for the people of Cambridge. A subsequent four-year building project was undertaken in 1610, with a small artificial river being constructed which flowed along both sides of Trumpington Street towards St Catherine's College.

The Market Place branch of Hobson's Conduit was completed in 1614 and brought fresh water to a central fountain. This fountain was made of stone incorporating decorative carvings and provided access to fresh water for residents and traders. As such the fountain became a gathering point for the community as a central point for the city. This original fountain, Hobson's Conduit, was removed from Market Hill to its present site at the junction of Trumpington Road and Lensfield Road. This was due to Market Square being redeveloped in 1855 following the Great Fire and a Gothic Revival gabled fountain being erected in its stead. The fountain's original stone canopy was removed in 1953 having been found to be unsafe.

With the emergence of the private motorcar at the turn of the 20th century the market space began its evolution towards the configuration we see today. The Gothic Revival fountain was erected in 1953 which maintained the flow of fresh water to the square, however the conduit which supplied the fountain was cut off in the 1960s during the construction of the Lion Yard shopping centre development.



From 1614 - 1856
The Market Place branch of Hobson's Conduit was completed in 1614. This branch brought fresh water to the market fountain in the centre of the previous Market Place.



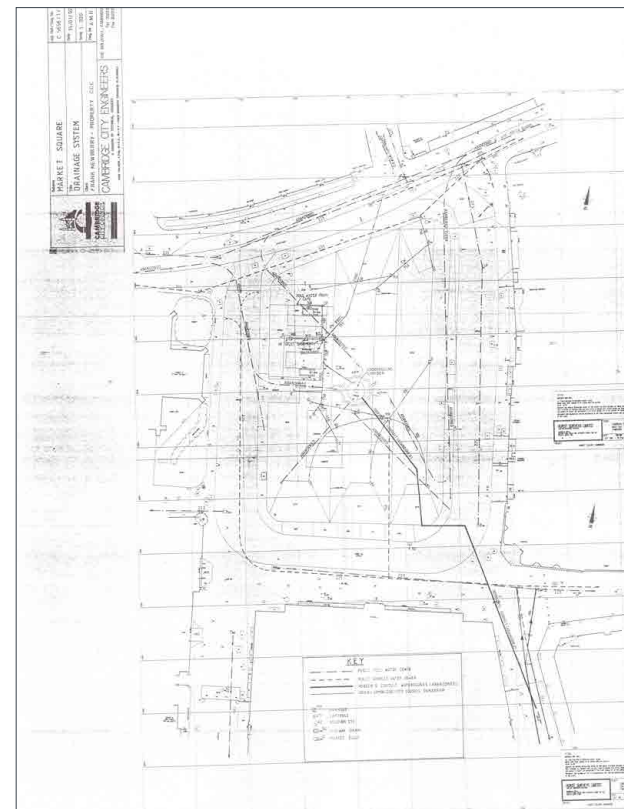
From 1855 - 1953
Following the fire in 1849, the Market Square was redeveloped. In 1855 a Gothic Revival gabled fountain was erected and the original structure of Hobson's Conduit was moved to the corner of Lensfield Road and Trumpington Road in south Cambridge in 1856.



From 1953 - present
In 1953 the fountain was found to be unsafe and taken down. It was removed to the yard of the Cambridge and County Folk Museum, which is the former site of the old White Horse Inn in Castle Street.



Engraving of Thomas Hobson

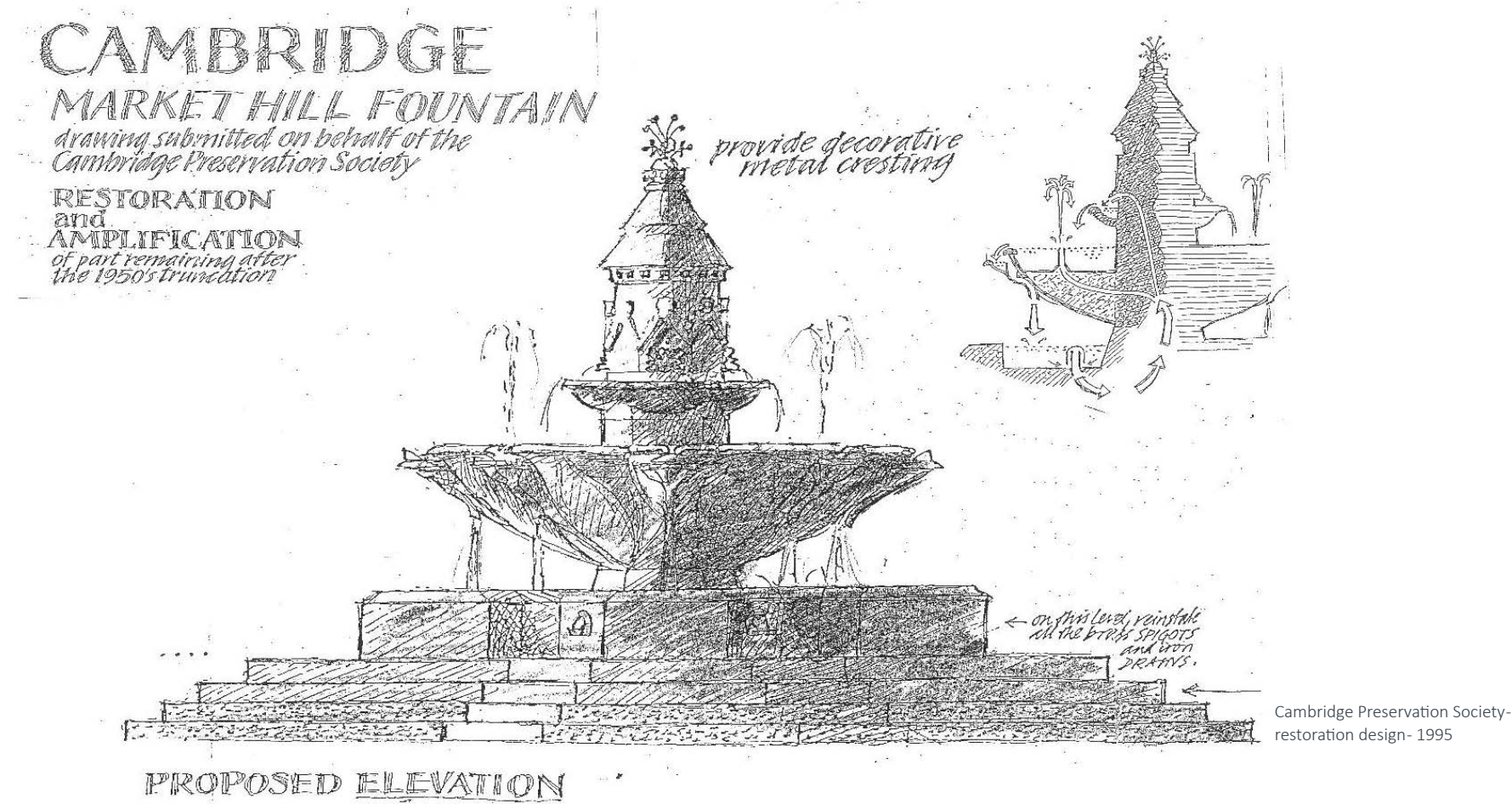


Drainage system - Hobson's Conduit abandoned
Cambridge City Engineer surveyed in 1992



Hobson's Conduit

3.2 The Fountains: Grade II Listed Central Fountain Feasibility



THE MARKET SQUARE, CAMBRIDGE - CONDUIT BUDGET ESTIMATES FOR THE VARIOUS OPTIONS CONTAINED IN THE FEASIBILITY STUDY

| | £ |
|--|---------|
| 1. Hobsons conduit returned to the Market Square including new base. | 65,000 |
| 2. Hobsons conduit replica (without crestings). | 90,000 |
| 3. Hobsons conduit - simplified design. | 55,000 |
| 4. Gothic fountain rebuilt on existing base. | 175,000 |
| 5. Gothic fountain - simplified design. | 110,000 |
| 6. Cambridge Preservation Societies design. | 85,000 |
| Rattee and Kett further options - | |
| 7. Cambridge composition by Matthew Simmonds. | 75,000 |
| 8. Lead cupola Trinity type fountain. | 65,000 |
| 9. Obelisk or column. | 65,000 |
| 10. Standard cast iron products. | 70,000 |
| 11. Standard cast stone mouldings. | 45,000 |

The budgets exclude VAT and have been formulated on current day costs excluding any professional or statutory fees or contingencies.

Budget costs for the restoration of the central fountain in 1995. Figures shown are taken from report 'The Market Square, Cambridge Fountain and Conduit Feasibility Study' by Rattee And Kett 1995



From 1614 - 1856

1995 Rebuild Cost- £55,000.00- £90,000.00



From 1855 - 1953

1995 Rebuild Cost- £175,000.00



From 1953 - present

1995 Rebuild Cost- £85,000.00 - £110,000.00

3.0 Context

3.2 The Fountains: Grade II Listed Central Fountain Feasibility

As a key historical feature within the Market Square any works to, restoration or relocation of, the Grade II listed fountain will require engagement with key stakeholders and Historic England. This would need to occur early in the design process to avoid implications or objections to any proposed design which seeks to alter the fountains appearance or location.

Previous design proposals for the square have faced opposition from stakeholders due to the proposed relocation of the fountain from its current central location, auguring that moving the fountain, combined with significantly altering the layout of the existing market stalls, would significantly erode the authenticity of the space as Cambridge's market square.

As such discussions with Historic England, and other key stakeholders, should be balanced within an understanding of the vision and objectives for the space. This engagement should be held early in the design process to understand potential proposals and opportunities for the enhancement of the square.

3.3 Observations on Public Realm

This section presents an overview of the key public realm issues the square currently experiences. These observations have been collated through a process of on-site analysis, engagement with technical officers and a desktop study of the square and its environs.



1. Public Realm Condition and Quality

Generally, the public realm is functional and utilitarian. The quality of pavement materials varies between low and high quality and in some areas lack consistency. Market Hill, as Public Highway, is constructed of an asphalt surface course which is circa 7-8m wide. This width of asphalt exacerbates the utilitarian look and feel of the public realm in its current state. There are high quality materials present within the square, these are primarily the pink granite setts located within the market space itself. The setts are high quality and in good condition however there is evidence of movement and subsidence, particularly around the central fountain, which results in troughs that collect debris and dirt within the pavement surface.

Street clutter is prevalent throughout the area. This includes litter bins, cycle parking, bollards and commercial refuse containers. There is a lack of seating or places to rest within the public domain. The tidiness of the public realm is greatly impacted by the market's operational requirements which vary throughout the day.



3. Current Building Use

Ground floor uses are primarily retail around the square, with the exception of the Guildhall and the Church of Great St Mary. There is a good variety in the retail offering, with food and beverage uses located in the north-east corner of the square.

The permanent market occupies most of the central area of the square and generates a high level of activity. The uses on upper building floors vary from residential, student accommodation and office spaces.

Examine the potential upgrade of shop fronts around the square to achieve a higher visual quality and consistency. Promotion of ground floor uses which engage with the public space, such as an increase in food and beverage and al fresco dining spaces.



2. Area Character and Heritage

The Market Square is an area of 'significant' heritage value, as indicated within the Historic Core Appraisal, and as such is surrounded by many listed buildings and features including the Guildhall, the Church of St Mary the Great and the central fountain. Moreover it is located at the heart of the historic core of Cambridge, drawing many tourists and visitors to the area.

The current materiality and finish within the public realm is, in part, not befitting of the historical significance of the space. In some instances, such as the large central area of granite setts or granite kerbs, the materiality is appropriate to the square's setting. However many parts of the square, particularly the surrounding pavements, are finished in lower quality concrete and reconstituted materials.



4. Building Frontages and Interface with the Public Realm

The civic and religious buildings on the southern and western edge of the square generate little ground floor activity but contribute greatly to the quality of the setting and the character of the square. The retail units on the northern and eastern frontage generate a good level of activity, with the exception of the service entrance to Marks and Spencer.



5. Pedestrians

The area experiences high pedestrian flows throughout the year. Tourists as well as local visitors visit it as a destination but also as a route to get to other parts of the city centre and beyond.

The pedestrian environment is generally of average or poor quality. Constrained footways, road layouts designed around vehicle movement, vehicular presence and street clutter significantly impact on pedestrian access, movement and enjoyment of the space.

Existing surface material types, changing levels and maintenance issues impede pedestrians, particularly those with visual or mobility impairment, as reflected in a recent access study undertaken by Beacon Planning on behalf of Cambridge City Council (2015).

Market Square and its surrounding streets can become isolated and unpleasant in the evening. Visitors and local residents perceive the area as unsafe and anti-social behaviour is an issue after dark.



8. Parking and Loading

Market Square is within a restricted parking zone (RPZ) where no waiting is permitted at any time in Market Hill. The existing parking-related on-street signage is confusing and misleading, particularly on Trinity Street and Sidney Street. It is understood that vehicles with a permit can access the area at any time via the Trinity Street rising bollards by using an electric transponder device. 224 parking and loading permits are currently on issue.

Loading including market set-up/set-down activities is not permitted between 10am and 4pm from Monday to Saturday. On Sundays loading is permitted at any time. The presence of vehicles within Market Hill impacts on pedestrian and cyclist movement and their enjoyment of the space. Existing parking and loading arrangements on Kings Parade can impact on pedestrians' ability to move around with ease between this location and Market Square and detracts from this iconic area and the surrounding buildings.



6. Cyclists

Market Square is popular among cyclists, both as a destination and as part of their route to and from other parts of the city and beyond.

The provision of cycle infrastructure in the area is constrained due to the historic nature of the streets and existing traffic management restrictions. This can result in higher levels of pedestrian and cyclist interaction and some conflict, particularly during peak travel times.

There is a high level of cycle parking provision within a short walking distance. These spaces are in high demand, resulting in bikes being left (locked) against street furniture including railings and signposts, impacting on pedestrian movement and the quality of the public realm.



9. Green Infrastructure

Publicly accessible green open space is limited in close proximity to the study area. The extensive green spaces of the Backs are private land, but do contribute towards the green infrastructure of the city in terms of visual and ecological amenity.

The closest publicly accessible green space from the study area is Christ's Pieces, located approximately 300m east from the square. Cambridge Market Square is the main civic hard space in the city and displays very little greenery: the only existing vegetation on the square is located within the plot boundary of the Church of St Mary the Great.



7. Vehicular Access and Traffic Management

Vehicular access arrangements to Market Square are restricted. The restrictions currently vary on a street-by-street basis to control the times in which motorised vehicles can access the city's historic core. To the uninitiated visitor arriving by vehicle, the existing traffic management measures are likely to result in misunderstanding and confusion. This is particularly problematic on St John's Street and Sidney Street.

Regardless of the existing traffic management measures, the compact nature of Market Square, its connecting streets and the presence of vehicles within the area contributes to a difficult environment for pedestrians and cyclists to move around, compromising enjoyment of this important public space.

Cambridge City Council is working with the Police, County Highways, GCP and specialists to assess vehicle-activated risk areas in the city centre and identify appropriate mitigating measures. This is likely to affect vehicular access and traffic management.



10. Lighting Provision

Cambridge Market Square is illuminated using single and double neutral lighting posts. These are mainly located on the outer edge of the central part of the square, servicing the adopted highway. Adjacent streets including Rose Crescent, Petty Cury, Guildhall Street, Peas Hill and St Mary's Passage are fitted with varied wall-mounted lighting.

The lighting provision is therefore functional following adoptable guidelines. The central market space area is poorly lit. Feature lighting which offers varied visual interest is not provided and there is no feature lighting of significant building façades.

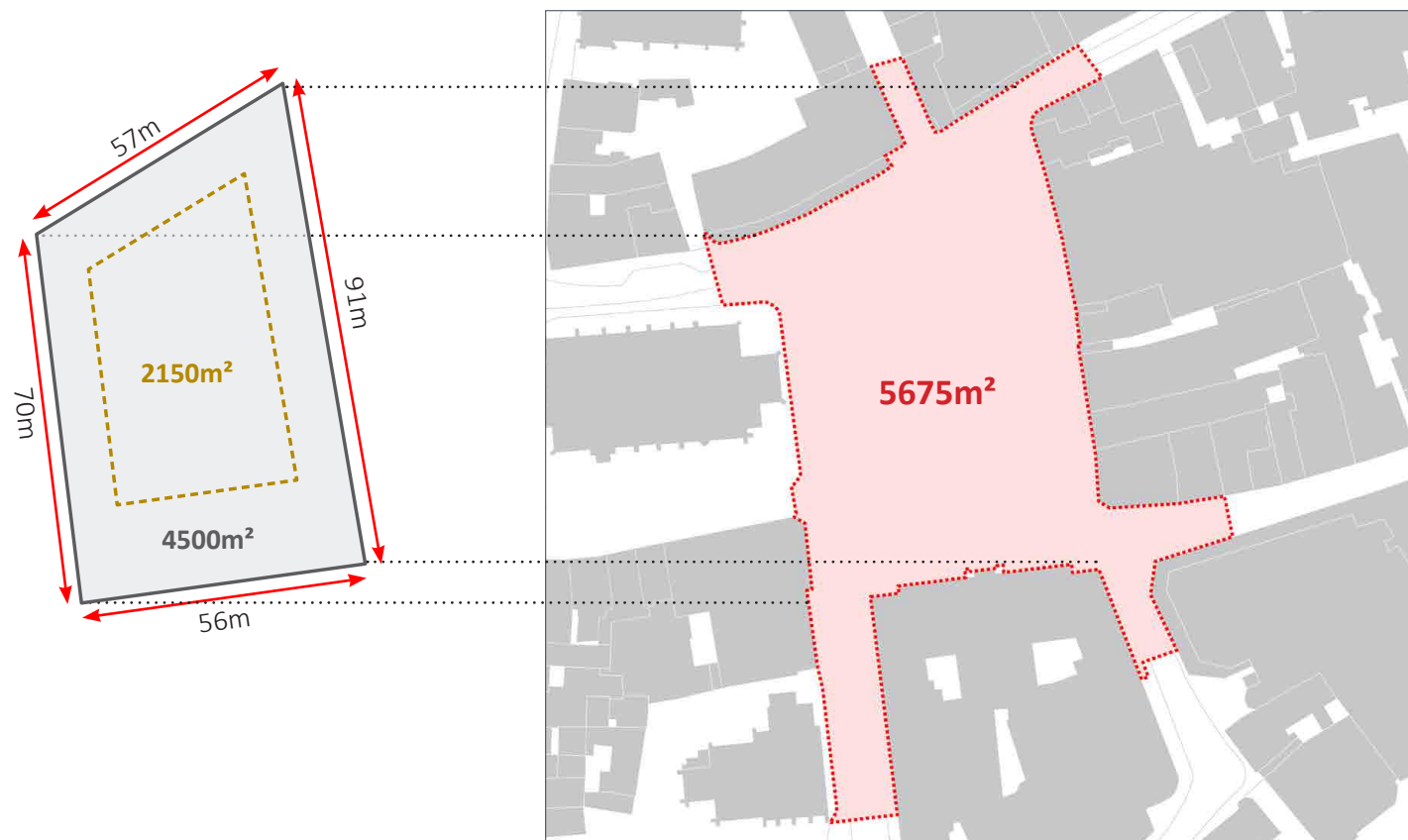
3.0 Context

3.4 Cambridge Market Square: Key dimensions

Whilst being the largest public hard space in Cambridge, Market Square does not hold enough space to accommodate all of its desired functions. In particular constrained dimensions are seen to pavements along the eastern and western edges of the square to the perimeter of the central market space, 1.69m and 1.90m respectively.

Key points:

- The whole of the study area – which includes sections of St Mary’s Street, St Mary’s Passage, Market Street, Peas Hill and Petty Cury – measures approximately 5,675sqm.
- The whole of Market Square, including the market area and the carriageways, measures approximately 56 x 80m for an area of 4,500sqm.
- The central area of Market Square, currently mainly occupied by the market and excluding the carriageway, measures approximately 2,150sqm.



Dimensions and area of central part of the square

General study area boundary and area

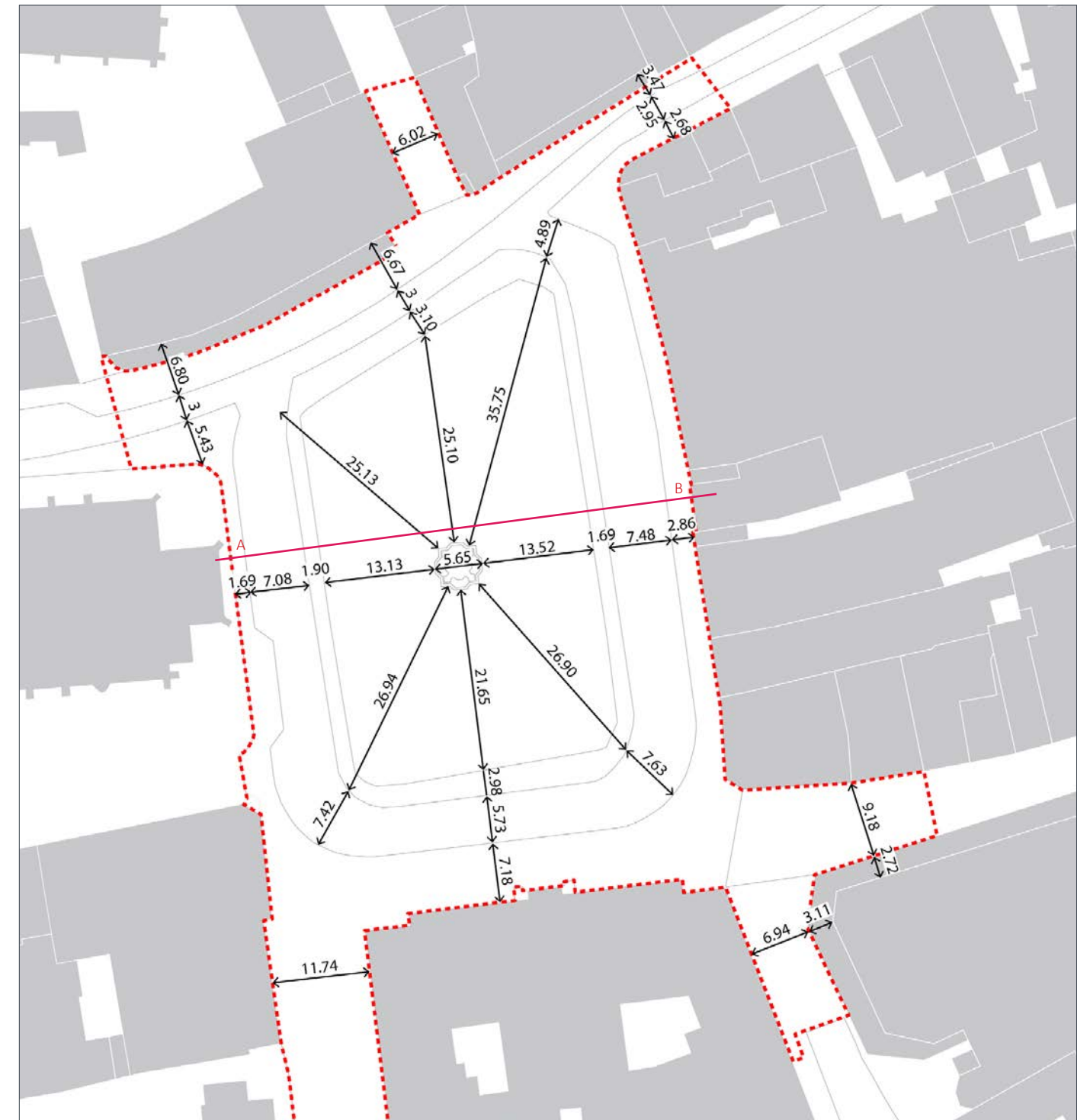


Diagram showing detailed dimensions across the square



A

B

Section showing narrowness of pavements and the width of existing carriageway. Pedestrian spaces are disproportionate to vehicular spaces.

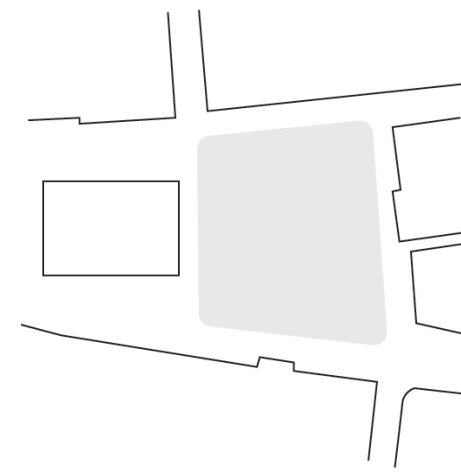
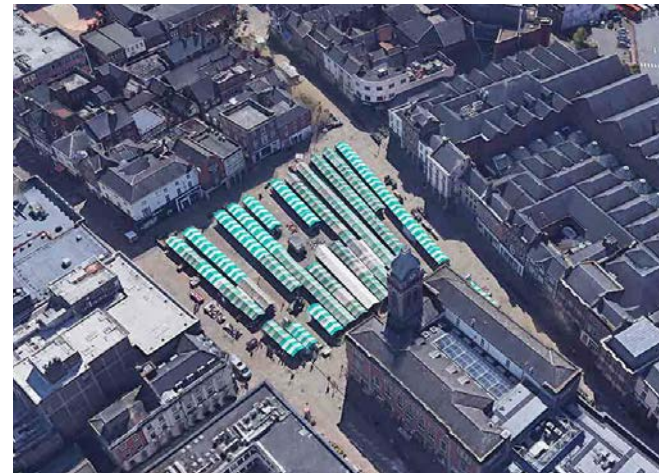
3.0 Context

3.5 Comparable Squares

These contextual examples of other Market Squares across the UK are not intended to represent a comprehensive review, but this initial perusal does offer some initial interesting observations, including:

- Many squares are, or have been, dominated by vehicles, both moving and parked.
- The diversification of activities and the introduction of spaces for people to dwell, alongside the market use, is a recurrent topic of study and change for many squares.
- In recent years, some have witnessed initiatives to address vehicular traffic, ranging from increasing pavement space to almost total exclusion of vehicles.
- Some of these interventions have been executed with greater sensitivity towards heritage considerations than others, but they do help illustrate the principle of introducing change and perceived enhancements to a square.

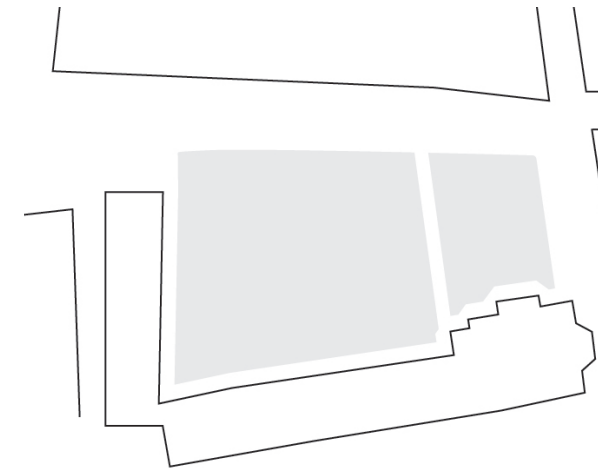
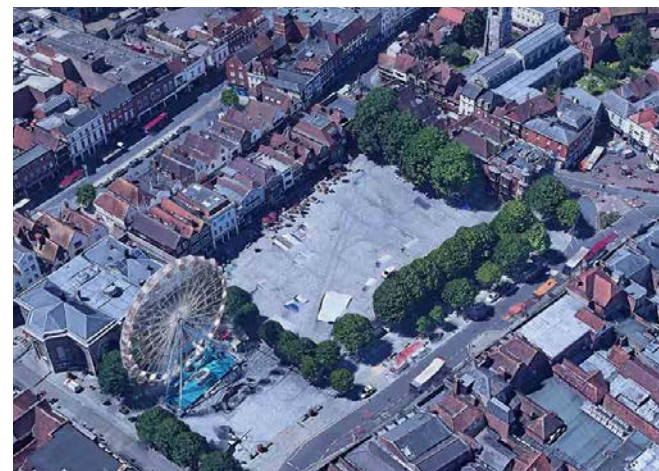
Market Place, Chesterfield, Derbyshire



Area: 4,600m²
App. number of market stalls: 120
Market frequency: Permanent
Other key features: Historical market town, refurbished Market Hall, pedestrian zone, historical stone paving throughout

Chesterfield Market Place displays similar dimensions and spatial structure to Cambridge Market Square, with an equally large and permanent market. The historical setting of the space is reflected in the massing of the surrounding buildings. This creates a street frontage similar to that of the Market Square in Cambridge.

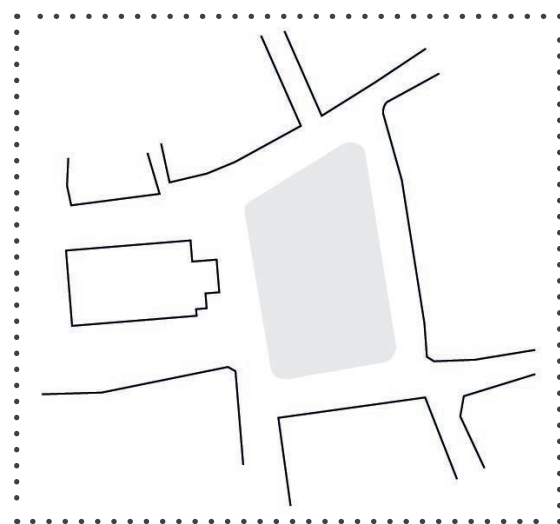
Market Place, Salisbury, Wiltshire



Area: 5,200m²
App. number of market stalls: 70
Market frequency: Twice a week
Other key features: Historical market town, trees bordering the square

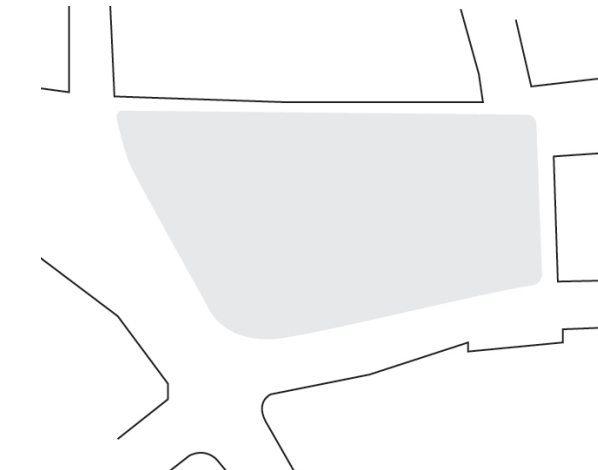
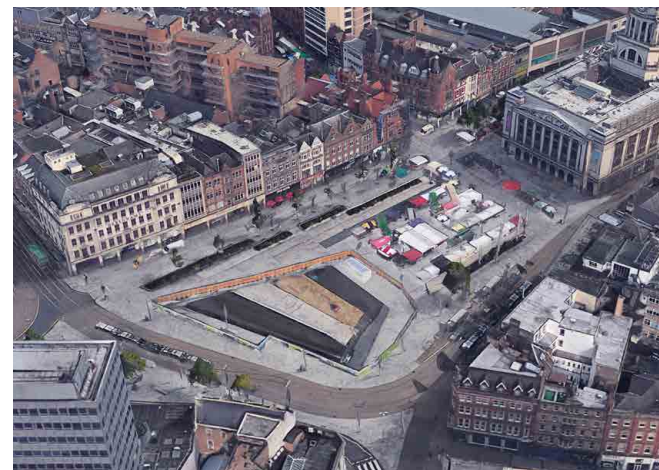
Recently refurbished and repaved, Salisbury Market Place hosts the market twice a week, leaving the square available for other activities outside of market days. Slightly larger than Cambridge Market Square and hosting a smaller and more compact market, there is provision for seating, tree planting and al-fresco dining. The square also benefits from a hard space specifically designed for public events.

Cambridge Market Square



Area: 4,500m² (not including surrounding streets)
Number of market stalls: 99

Old Market Square, Nottingham



Area: 8,000m²
App. number of market stalls: Variable size
Market frequency: Special event market only
Other key features: Trees & planting, water feature, civic square, tramway stop

Nottingham Old Market Square has recently been thoroughly refurbished and has seen the introduction of tree planting, water features and new paving throughout. It has become the civic square of Nottingham and is one of the most significant spaces in the region. It no longer hosts a permanent market but thrives on the succession of special events and performances such as concerts, seasonal markets and shows.

4.0

The Square Today














- 4.1 Ownership
 - 4.2 Building Use
 - 4.3 Listed Buildings & Features
 - 4.4 Traffic Management & Vehicular Access
 - 4.5 Existing Pedestrian Access Arrangement
 - 4.6 Existing Cycle Access Arrangement
 - 4.7 Parking, Waiting, Loading and Taxis
 - 4.8 Buses & Taxis
 - 4.9 Special Events
 - 4.10 Current Night Time Use
 - 4.11 Waste Management
 - 4.12 Current Storage
 - 4.13 Street Furniture
 - 4.14 Materials
 - 4.15 Lighting & Security
 - 4.16 Utilities
 - 4.17 Levels & Drainage
 - 4.18 Archaeology & Historical Features
 - 4.19 Air Quality
 - 4.20 Planting & Ecology
-

4.0 The Square Today

4.1 Ownership

Cambridge City Council (CCC) is the freehold registered proprietor of the land, which currently holds the daily market, registry title number CB287332. Market Hill, as a Public Highway, is under the jurisdiction of Cambridge County Council (County). As the highway authority, Cambridgeshire County Council is responsible for the maintenance of public roads within Cambridge. This role is defined in the Highways Act 1980. Any changes to the public highway will require legal agreement in advance of taking place.

Surrounding private ownership is varied between commercial ownership and educational ownership through the colleges of Caius College, the College of Our Lady and St Nicholas and the College of St John the Evangelist. The Guildhall and Great Saint Mary's are owned by the City Council and the Church of England respectively.

- Extent of adopted highway 
- Buildings and spaces owned by Cambridge City Council 
- Buildings in private freehold Proprietors:
- The Master and Fellows of Gonville and Caius College 
- CBRE UK Property PAIF Nominee Hodling Limited 
- MW Trustees Limited 
- Marks and Spencer Scottish Limited Partnership 
- Halifax Pension Nominees Limited 
- CBRE UKPF PAIF Nominee No.1 Unlimited 
- The Master Fellows and Scholars of the College of St John the Evangelist 
- Quest Capital Trustees Limited 
- Abrahams Consolidated Limited 
- Grand Arcade Partnership 
- The Provost and Scholars of the King's College of Our Lady and St Nicholas 



4.0 The Square Today

4.2 Building Use

There are a variety of uses displayed around Market Square ranging from restaurants, fast food and both large and independent retailers. Some food and beverage retailers have licenses for external dining areas. These external areas impact the width of usable footway, however also help animate the streetscape.

There are also a number of civic and religious buildings. The upper floors are occupied by residential, student accommodation and office uses.

Market Square is a place where people live, work, study, eat, shop and gather. This variety of uses contributes to the vibrant atmosphere of the square, mixing residents, students, shoppers and tourists.



4.0 The Square Today

4.3 Listed Buildings and Features

There is an important number of Grade I and II listed buildings and features around Market Square. These testify of the architectural quality and history of the city centre and form part of the character and identity of the space by giving it a strong, distinctive sense of place.

The prominent features within the square include:

- Grade I listed Church of St Mary the Great and its Grade II listed perimeter railings.
- Grade II listed Gonville and Caius College building.
- Grade II listed Guildhall.
- Grade II listed fountain in the centre of the square.
- Grade II listed 4 K6 telephone kiosks in the north-west corner of the square.
- Note: there has been an application made for listed status to be applied to the historic setts and railings within the central area of the Market Square. This application is in the process of consideration.



4.0 The Square Today

4.3 Listed Buildings and Features



Grade II listed fountain in the centre of the square, surrounded by the market



Grade II listed Guildhall building, south frontage of Market Square



Grade I listed church of St Mary the Great, western frontage of the square



Grade II listed telephone kiosks and Church of St Mary the Great perimeter railings



Grade II listed Gonville and Caius College building and adjacent buildings, northern frontage of the square.



Grade II listed buildings, eastern frontage of the square

4.0 The Square Today

4.4 Traffic Management and Vehicular Access Arrangement

Existing Vehicular Access Arrangements to Market Square

The existing traffic management measures have evolved over the years in response to the changing demands and needs of the city centre, as well as changes in statutory signing regulations and enforcement laws. Consequently the existing measures vary on a street-by-street basis, with a variety of physical measures and associated signage.

The existing vehicle restrictions to access Market Square include:

- **Sidney Street Gate:** No motor vehicles except buses, invalid carriages e.g. Dial-a-Ride vehicles, taxis and licensed hire cars are permitted. Loading is permitted for delivery vehicles for Petty Cury only. The gate is currently managed by Cambridgeshire County Council Parking Services team.
- **St John's Street rising bollards:** No motor vehicles except for loading are permitted from Monday to Saturday between midnight and 10am and between 4pm and midnight.

Permit holders are permitted to access this street between Monday and Saturday between 10am and 4pm. On Sunday permitted motor vehicles can access St John's Street/Trinity Street at anytime as well.

It is understood that permit holders include University and College officials, and Dial-a-Ride mini-vans can access the area at anytime. It is understood that some taxis also have permitted access.

A sightseeing tour bus is also currently permitted to use this route on Sundays.

- **Kings Parade / Senate House Hill fixed bollards:** No motor vehicles except emergency vehicles are permitted at anytime. Corn Exchange Street, Wheeler Street, Bene't Street, Jesus Lane and St Andrew's Street are currently unrestricted (one-way) routes for motor vehicles to access the Market Square area.
- **Market Hill Traffic Management:** All vehicular movement within Market Hill is one-way and within a 20mph zone. Vehicles can enter Market Hill via St Mary's Street and leave the area via Market Street towards Sidney Street only.

Market Square and Market Hill are within a pedestrian priority zone, requiring vehicle drivers and cyclists to consider pedestrians. It is understood that currently only permit holders such as Blue Badge holders, Dial-a-Ride, College/Cambridge University permit holders (and possibly some taxi drivers) can access Market Square via St John's Street between 10am and 4pm Monday to Saturday.

Delivery vehicles (including market stall holders) can enter Market Square via St John's Street outside of the 10am to 4pm Monday to Saturday restrictions, and at any time on Sunday.

There are no vehicle restrictions currently in place to the south of Market Square.

- **Fully Pedestrianised Streets**
St Mary's Passage, St Edmund's Passage, Petty Cury and parts of Peas Hill and Guildhall Street are currently fully pedestrianised, with no vehicles permitted at anytime.
- **Night-time Vehicle Access**
From observation and discussion with technical stakeholders, vehicle movements in Market Hill differ between day-time and night-time. After market set-down, vehicles can be found parked in and around Market Square. Due to the presence of temporary taxi ranks in and around the area (see Section 3.7) a lot of pick-up and drop-off activity takes place, related directly to the night-time economy.
- **Waste Management**
With regards to market waste removal, refuse vehicles enter the area as demand requires to empty the compactor unit. This waste removal is currently coordinated by the market manager. It is believed that street bins are emptied on an ad-hoc basis several times a day, as demand arises. Commercial waste removal is managed separately.
- **Permit Holder Access**
At the time of writing, 224 permits had been issued allowing permit holders access to the area via St John's Street/Trinity Street (using an electronic transponder device) or via Sidney Street. It is understood that permit holders include University and College officials, businesses, refuse vehicles, Dial-a-Ride and possibly taxis.
- **Emergency Access**
Emergency vehicles have access to the area at any time.



Rising bollards on St John's Street



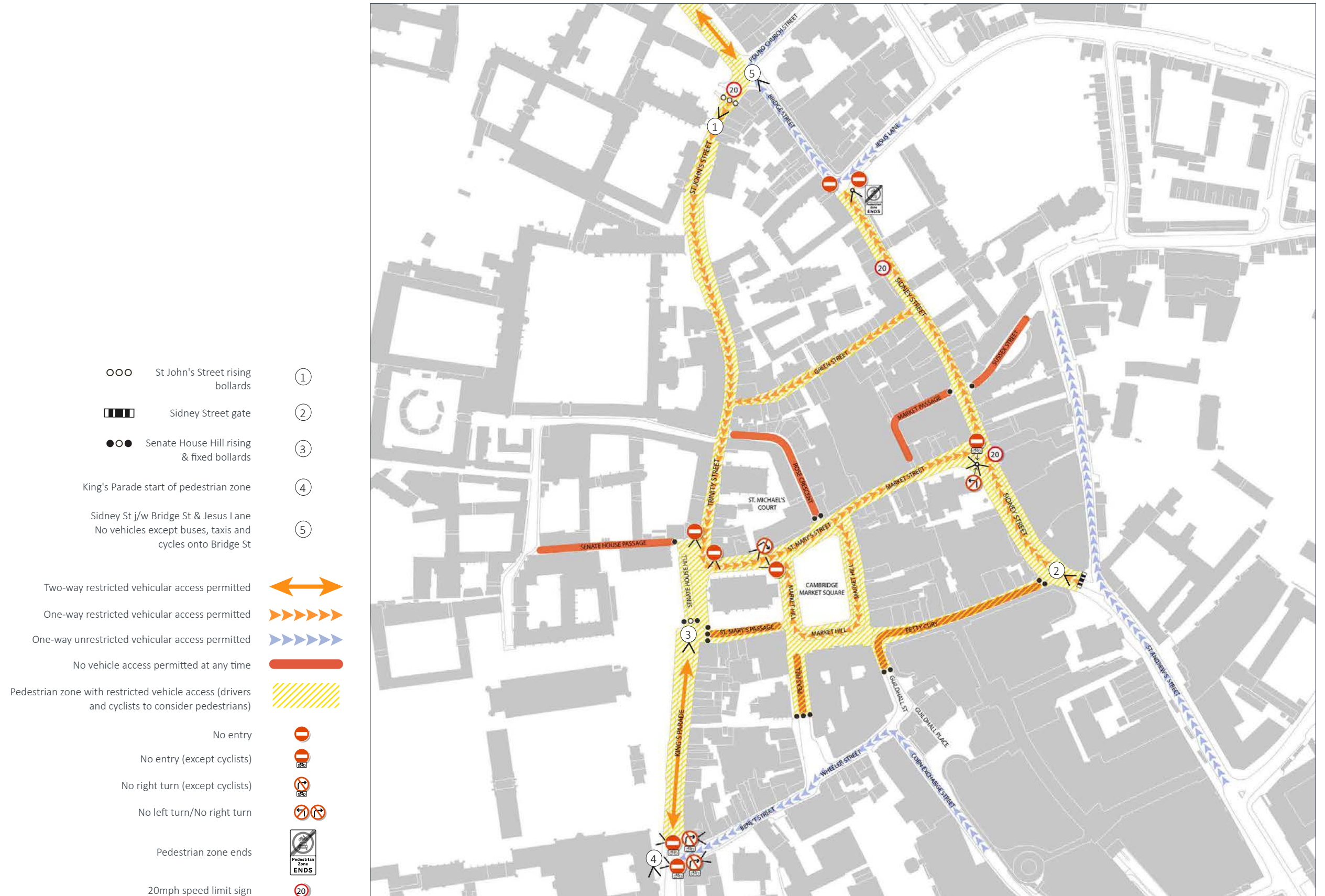
Market Hill carriageway



Market Street – pedestrians walking in the carriageway

4.0 The Square Today

4.4 Traffic Management and Vehicular Access Arrangement



4.0 The Square Today

4.4 Traffic Management and Vehicular Access Arrangement

1 St John's Street



Rising bollards on St John's Street



Signage clutter. St John's Street signage: other danger, rising bollards, pedestrian zone (drivers and cyclists consider pedestrians), maximum speed 20mph



A confusing sign: pedestrian zone; no motor vehicles except for loading (Mon-Sat midnight-10am, 4pm-midnight and Sunday at any time and permit holders Mon-Sat 10am-4pm)

2 Sidney Street



Restriction gate on Sidney Street at the junction with Hobson Street



Restricted parking zone; no waiting and no loading (Mon-Sat, 10am-4pm)



Confusing sign and also in disrepair. Pedestrian zone; no motor vehicles except buses, invalid carriages and for access by taxis and licensed hired cars and loading by delivery vehicles for Petty Cury only are permitted when the gate is open; no waiting at any time

3 Senate House Hill



Rising and fixed bollards on Senate House Hill at the junction with King's Parade



No motor vehicles sign. Emergency access Keep Clear sign which is in disrepair.

4 King's Parade



Pedestrian zone; no motor vehicles except for permit holders and people with disability

5 Sidney Street



Straight ahead (Bridge Street) buses, taxis and cycles only; no motor vehicles permitted (pedestrian zone) to turn left to St John's Street; all routes permitted to turn right

4.0 The Square Today

4.0 The Square Today

4.5 Existing Pedestrian Access Arrangements

Market Square is located within a pedestrian priority zone where vehicles and cyclists are obliged to pay particular consideration to pedestrians. The effectiveness of that priority relies to some extent on the visibility of those related signs. At present, no physical measures are in place to manage vehicles or cycle access or movement around Market Hill.

Due to the area's important iconic status, large volumes of tourists can be found clustered around the edge of Market Square and King's Parade, impacting on access and movement for other pedestrians and cyclists. Cambridge attracts approximately 8 million visitors per annum, a rise of approximately 3 million over the past three years.

St John's Street and Trinity Street provide important access for Cambridge University campus students and staff. Trinity Street and Sidney Street are also important pedestrian links for local residents travelling north and south of the city centre.

St Mary's Passage, St Edmund's Passage, Petty Cury, the northern section of Peas Hill and Guildhall Street are fully pedestrianised (no motor vehicles or cyclists are permitted). These streets can consequently become isolated and intimidating, notably after dark.

There are multiple wayfinding signs and maps which indicate directions and walking distances to popular destinations. These signs and maps are generally easy to read and in good condition.

There are inconsistencies in the quality, colouring of surfaces and levels on and around Market Square including Market Hill, which impacts on accessibility, as do the cobbles which can also be challenging for people with visual and mobility impairments. This is reflected in a recent accessibility study undertaken by the Council.*

Street clutter, the use of 'A boards' within the footway, and indiscriminate cycle parking can also impact on the available footway for pedestrians to move around. The exceptions are parts of Sidney Street and the space outside the Guildhall.

There is little or no seating in, or in close proximity to, Market Square, resulting in visitors sitting on kerbs, around the fountain and other available street furniture.

A lack of natural surveillance, street clutter, isolated dark areas and poor lighting can create an unwelcoming pedestrian and cyclist environment after dark and can encourage anti-social behaviour during the early hours.

*Cambridge City Access Study, Beacon Planning (January 2015)



Rose Crescent (view from Market Street), a fully pedestrianised street



A wayfinding sign located on Senate House Hill



Visitors gathering around a wayfinding sign in front of the Guildhall



'A-board' (street advertising) on Rose Crescent which can obstruct pedestrians, particularly those with visual impairment.



Pedestrian priority zone (Drivers and Cyclists Consider Pedestrians) sign



Visitors utilising the historic fountain as a seating area on Market Square

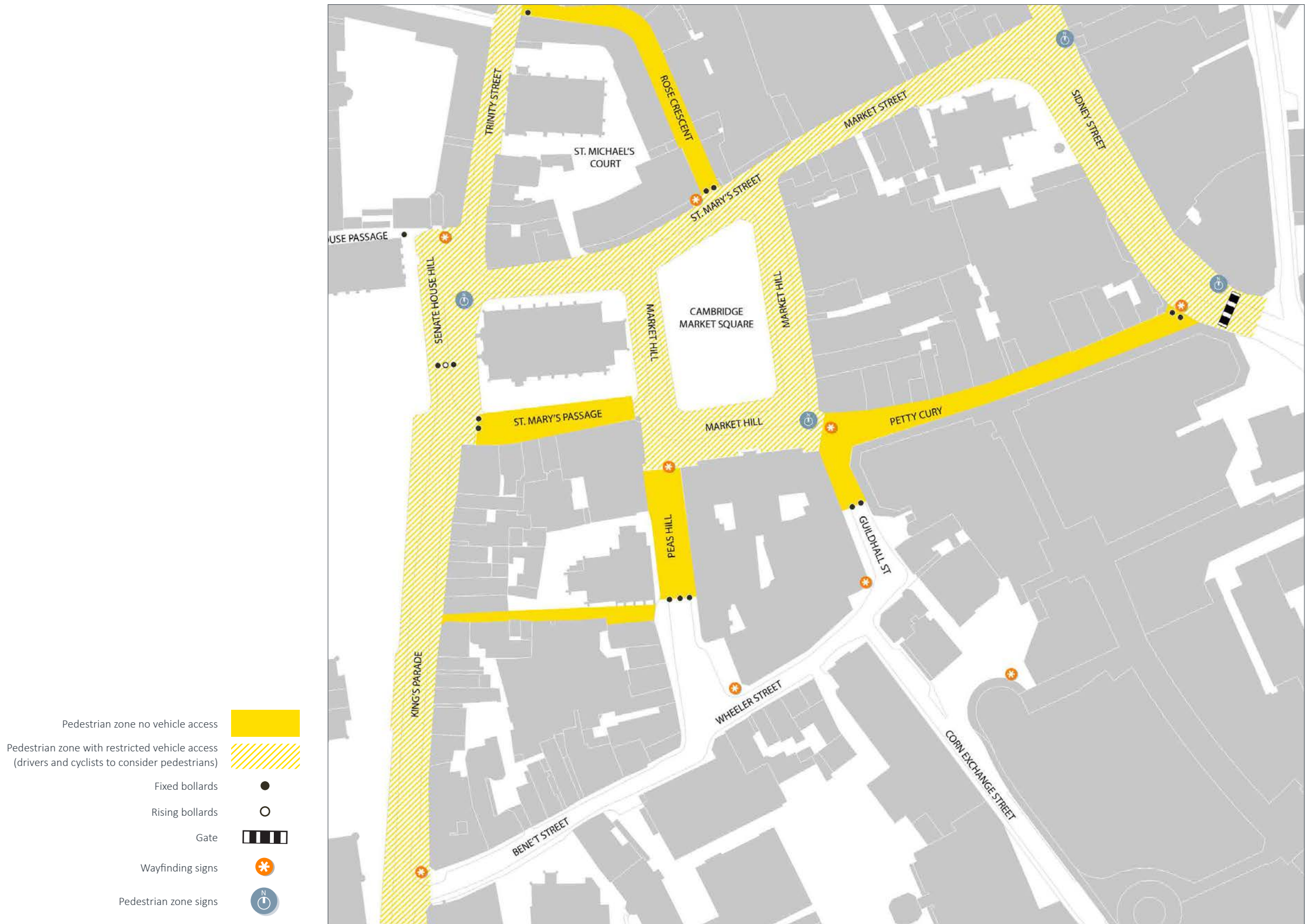


There is currently limited seating provision in front of the Guildhall



Senate House Hill and King's Parade attract significant volumes of tourists, impacting on other footway and road users

4.5 Existing Pedestrian Access Arrangements



4.0 The Square Today

4.6 Existing Cycle Access Arrangements, Movement and Cycle Parking

Cycling Access

Market Square is located within a pedestrian priority zone where vehicles and cyclists are obliged to pay particular consideration to pedestrians. The effectiveness of that priority relies to some extent on the visibility of those related signs. At present, no physical measures are in place to manage vehicles or cycle access or movement around Market Hill.

Cycling is currently not permitted on St Mary's Passage, St Edmund's Passage, Petty Cury and the pedestrianised parts of Peas Hill and Guildhall Street.

Cyclists are required to follow the one-way system on Trinity Street, St Mary's Street, Market Hill, Market Street and the northern section of Sidney Street. Cyclists are however also currently permitted to cycle in contra-flow on Bene't Street, Wheeler Street, Corn Exchange Street and the southern section of Sidney Street. There is currently a poorly maintained contra-flow cycle lane which starts on Wheeler Street and continues along Corn Exchange Street towards Downing Street.

The existing inconsistent traffic management measures can impact on cycle access, resulting in cyclists ignoring restrictions – for example cycling contra-flow on some restricted streets such as the northern part of Sidney Street.

It is understood that some businesses and market traders currently use cargo bikes to make deliveries. However take-up of this sustainable mode, which has a lower impact on the historic streets, currently remains low.

Cycle Parking

Dedicated cycle parking provision around Market Square is substantial, with approximately 497 on-street spaces located within a five minute walking distance.

The Grand Arcade cycle park offers over 500 free cycle parking spaces and closes at 11:30pm. There is also secure cycle parking (51 spaces) offered by the Rutland cycling shop at a cost of £1.50 per day.

There are also two bike shops (located on Market Square and in the Grand Arcade).

Because demand for cycle parking in this location is very high, bikes are often found left (locked up) against street furniture in multiple locations, including the railings around St Mary's Church, lamp columns and signposts. This can cause difficulties for pedestrians and degrade the quality of the public realm.

(**https://www.police.uk/cambridgeshire/CamCity_North_City/crime/+zOlyS4/stats/)



Contra-flow cycling on section of Sidney Street which is currently not permitted



A cyclist who has dismounted from their bike on the pedestrianised Petty Cury



No vehicle access except cycles on Bene't Street



Contra-flow cycle lane on Wheeler Street



Cycle parking facilities on Peas Hill



Bikes parked by the railings surrounding St Andrew the Great Church



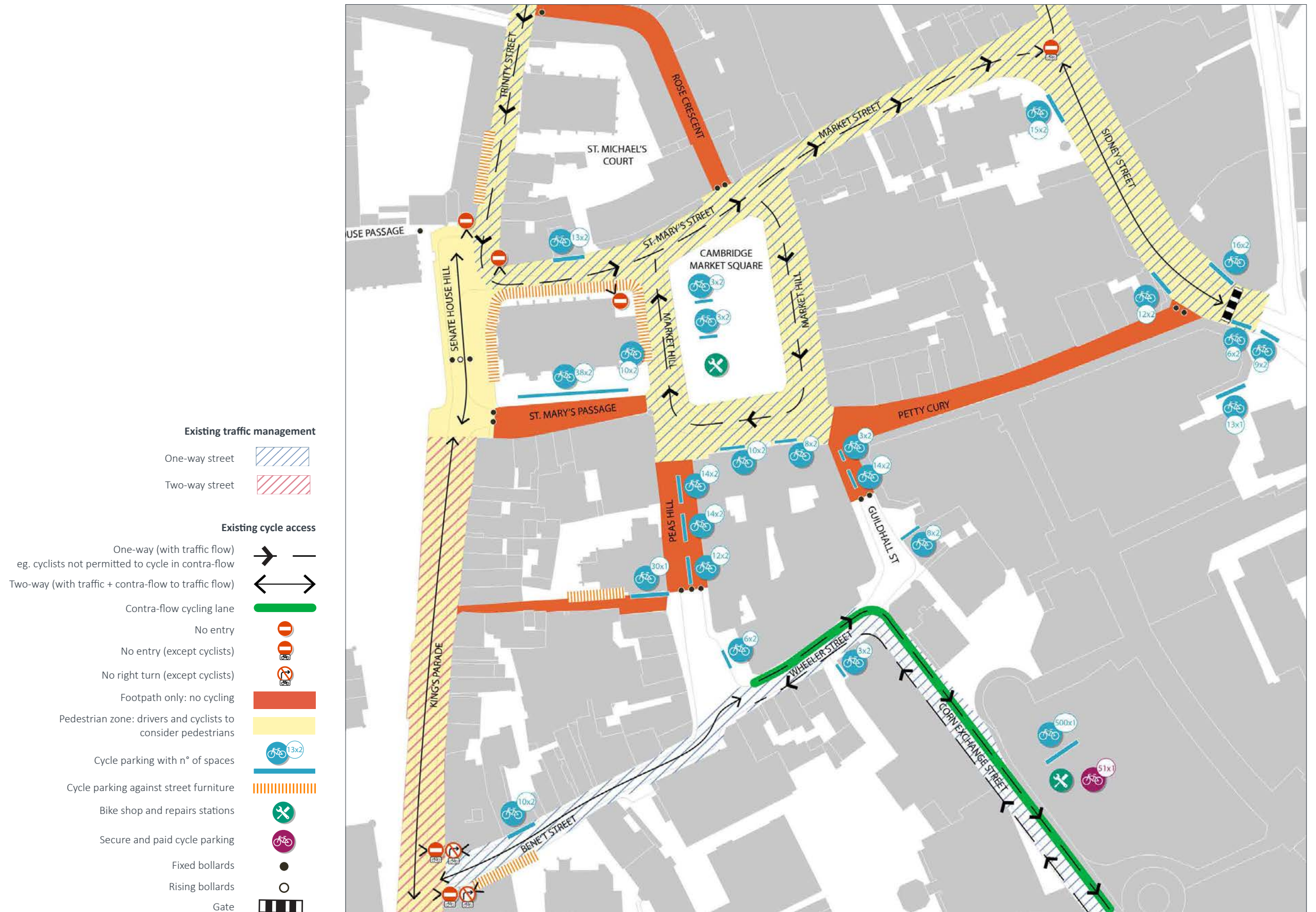
Bikes parked against a wayfinding sign on Sussex Street



Cargo bike delivery

4.0 The Square Today

4.6 Existing Cycle Access Arrangements, Movement and Cycle Parking



4.0 The Square Today

4.7 Parking, Waiting, Loading and Taxis

Market Square Restricted Parking Zone (No Waiting At Any Time)

Market Square is currently located within a restricted parking zone, with no waiting permitted at any time and no loading permitted from Monday to Saturday between 10am and 4pm unless by an authorised permit holder or an emergency vehicle.

Parking

The Grand Arcade shopping centre car park is a short walk from Market Square. The car park has 953 spaces and is open from Monday to Sunday, 24 hours a day. The car park is accessed via Corn Exchange Street only. There are currently two exits from the car park. It is believed that the majority of exit flows turn left towards Downing Street. The alternative route is via Wheeler Street and Bene't Street, which is believed to be particularly well used during busy times/special events.

There is no designated parking provision for market traders within the city centre. From discussion with market traders, after setting up they park on-street to the north of the city and then walk or cycle back to the market.

Accessible Parking (Blue Badge Holders)

There are approximately 16 accessible on-street parking spaces (for Blue Badge holders only) within a short walking distance of Market Square (10 on King's Parade, 4 on Peas Hill and 2 on Guildhall Street), where Blue Badge holders can park for an unlimited time.

The Grand Arcade car park also has 35 accessible parking spaces and allows 3 hours parking free of charge.

Loading

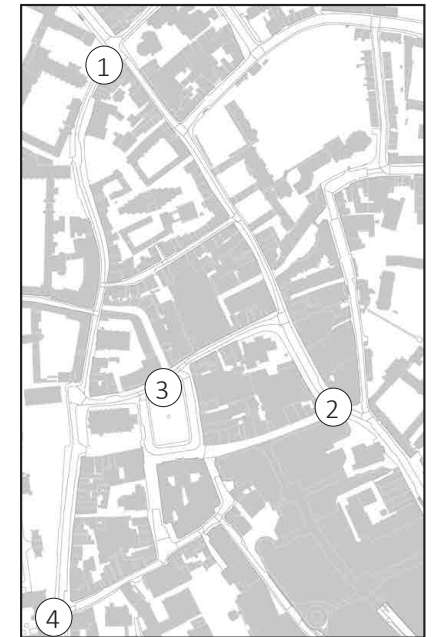
Deliveries and servicing can only take place within Market Square outside of the existing 10am to 4pm restrictions, unless the vehicle owner is an authorised permit holder or an emergency vehicle. There is also currently a Marks and Spencer foodhall delivery yard on Market Hill.

From observation and discussion with technical stakeholders, those delivery vehicles entering Market Square range in size from small transit vans to larger lorries. From discussion with technical stakeholders, the Cambridge Arts Theatre can receive a number of deliveries by large vehicles, which can sometime get stuck at the Corn Exchange Street/Wheeler Street junction which is tight due to the historical street pattern.

There are currently also five loading bays in close proximity to Market Square. Three are located on King's Parade and are for delivery permit holders only (with no time restrictions) and one is on Corn Exchange Street, which operates between 7am and 7pm only. The fifth loading bay is located on Peas Hill at the junction with Bene't Street. All of these loading bays appear to be well utilised throughout the day but turnover of spaces is not known. There is also a delivery yard with the Grand Arcade shopping centre car park.

Taxi Ranks

There are currently four taxi ranks located within a short walking distance of Market Square. The two ranks on Market Hill and Sidney Road operate between 7pm and 6am and the rank on Corn Exchange Street operates between 7pm and 7am. The taxi rank located on St Andrew's Street operates 24 hours a day, seven days a week.



Existing Restricted Parking Zone (RPZ) Sign Locations



St John's Street RPZ Sign



Sidney Street RPZ Sign

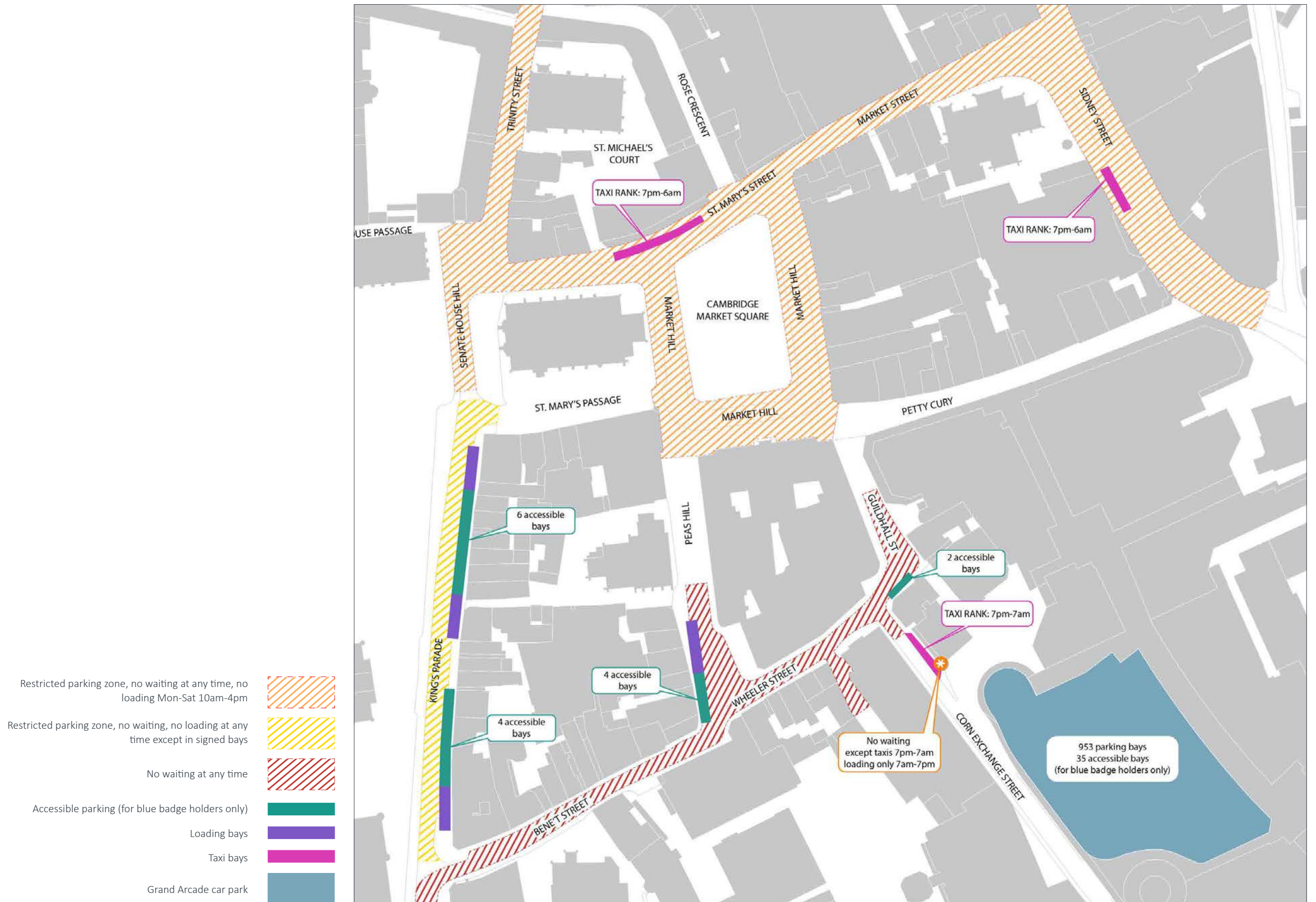


Market Hill RPZ Sign



King's Parade RPZ Sign

4.7 Parking, Waiting, Loading and Taxis



4.0 The Square Today

4.7 Parking, Waiting, Loading and Taxis



Accessible parking spaces (for Blue Badge holders only) on Peas Hill



Accessible parking spaces (for Blue Badge holders) on King's Parade (no time restriction)



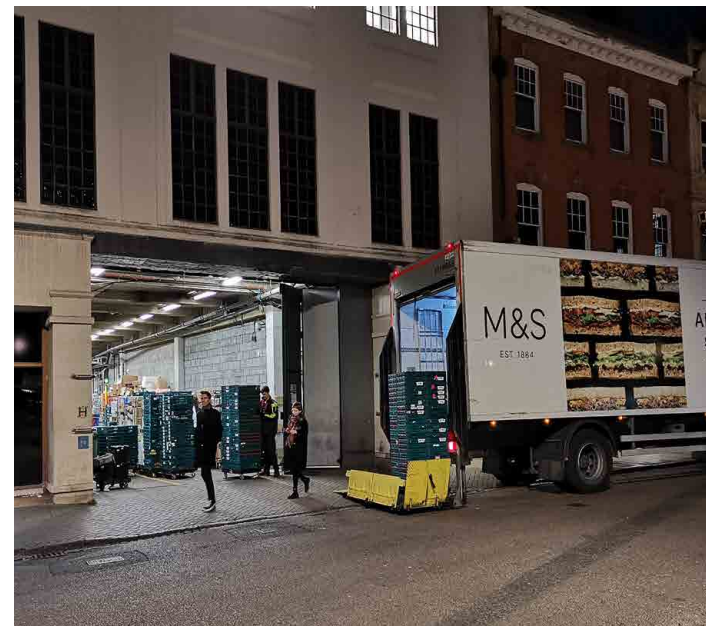
A large delivery vehicle on Market Hill



Delivery vehicles during morning period on Peas Hill



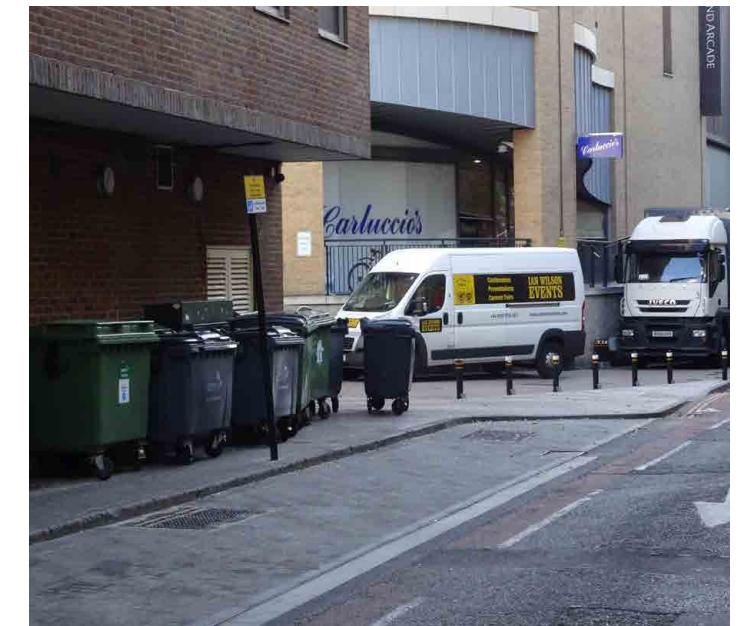
Trader vehicles unloading on Market Square during the morning set-up



Evening deliveries to M&S Foodhall on Market Hill



A refuse lorry on Market Hill



A loading bay (7am-7pm) and a taxi rank (7pm-7am) on Corn Exchange Street

4.0 The Square Today

4.8 Buses and Taxis

Buses

The closest bus stops are located within a short walking distance of Market Square on St Andrew's Street, Jesus Lane and Bridge Street.

Sightseeing Tour Bus

A sightseeing tour bus travels through the Market Square area via Trinity Street, St Mary's Street, Market Street and into Sidney Street on Sundays.

Dial-a-Ride

Dial-a-Ride, a mini-bus service for people with disabilities, can access Market Hill throughout the day. It operates on a flexible basis, with schedules, pick-up and drop-off points adjusted to individual needs.

Taxis

- Most visitors to Market Square and the surrounding area usually arrive either by bus, cycle or on foot. However, particularly as a consequence of limited evening and night-time public transport provision, taxis are also a popular choice. Taxis are also a popular choice for people with disabilities.
- Currently taxis are permitted to enter the area via Sidney Street when the gate is opened. It is also believed that some taxis also have access via Trinity Street rising bollards via an electronic transponder device, but it is not clear who and how many have this permission.
- For more information on the location of taxi ranks and access restrictions for taxis and other licensed hire vehicles, please see sections 3.4 and 3.7.



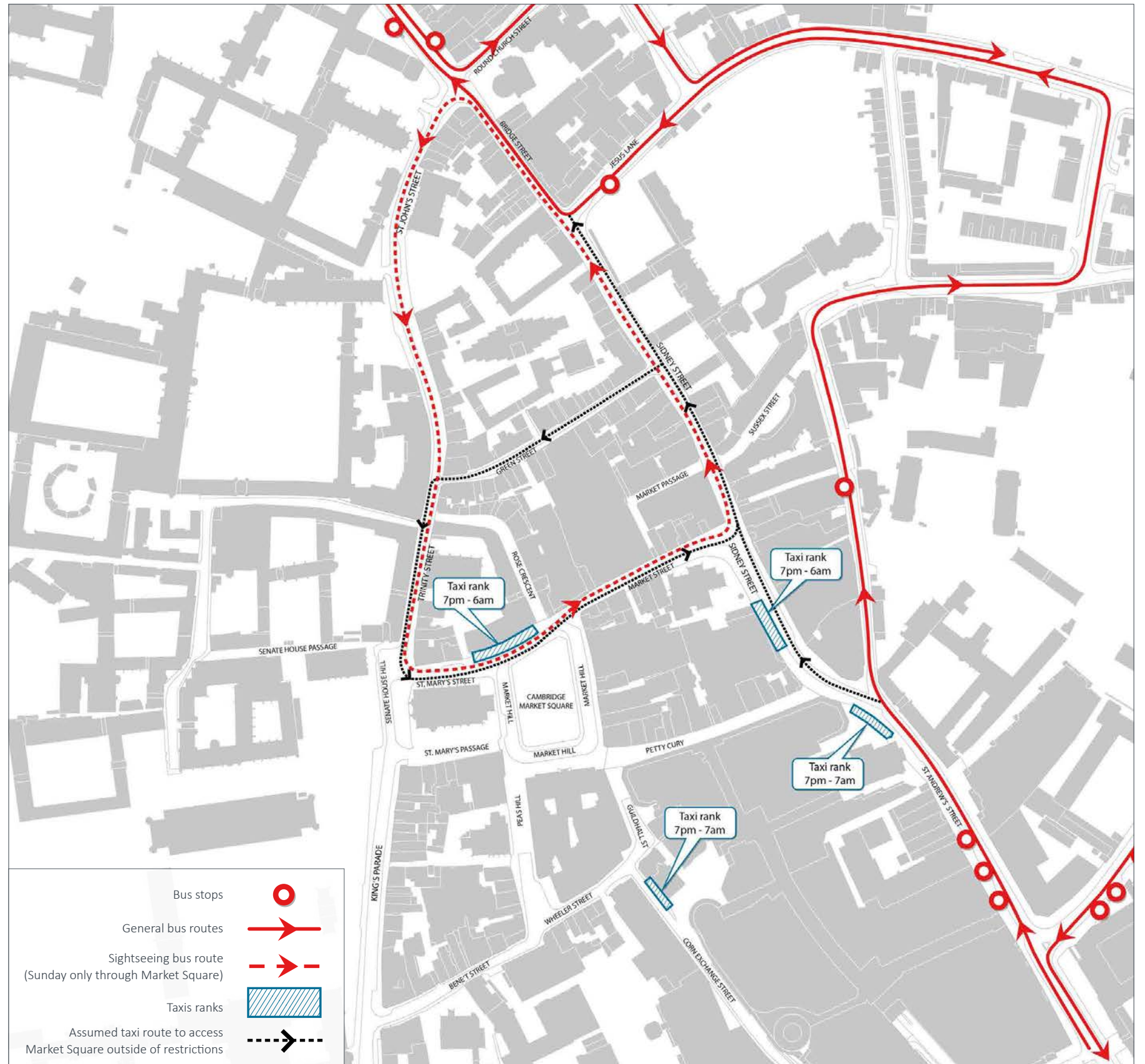
Bus stop located on Jesus Lane



One of three bus stops located on St Andrew's Street



A taxi rank located on St Andrew's Street



4.0 The Square Today

4.9 Special Events & Security

Events

Currently Market Square is used for events on an occasional basis. The main event space is located directly fronting the Guildhall, this is due to the restriction of space within the centre of the square due to the current arrangement of fixed market stalls. There are approximately four cinema outdoor screenings per year and a Christmas lights switch-on. A key objective of the project is to come up with a viable design that maximises the potential use of the space for commercial/community events and evening activities.

Cinema screenings typically take place on Friday nights. The screen is placed at the south-eastern corner of the square, with chairs placed fronting the Guildhall (200 person attendance for cinema screenings, 100 person attendance for the Royal Wedding). For the Christmas lights switch-on the stage is located fronting the Guildhall and event attracts around 5,000 to 7,000 people. It is ensured that the screenings are organised to be in synchronisation with the market traders. In addition, busking/street performances are a regular occurrence by the Snowy Farr statue located in the south-eastern corner of the square. This is also a location where large groups of tourists tend to gather.

Security

All information regarding safety and anti-social behaviour is taken from anecdotal sources.

The key safety issues related to Market Square involve rough sleeping and anti-social behaviour. All stakeholders identified the need to improve the square's safety at night; no safety concerns were identified during the day. Lighting and CCTV coverage within the square is poor, with only one CCTV camera overlooking the market. There are high levels of bike theft in the area.

There is a security related concern for all crowded places within the U.K. and it is important to consider mitigating measures for crowd protection.



4.0 The Square Today

4.10 Current Night Time Use

There exist two night time refreshment vans which occupy the market place beyond daytime trading hours (from 6pm). These are located to the north eastern and south eastern corners of the square and require/hold a Licence To Occupy by Cambridge City Council.

No specific market regulations govern evening markets, however when evening markets are proposed the current daytime regulations are extended to cover the event. Additional notices are required if evening events are proposed. The night time refreshment vans operate separately to the market, they are charged differently and hold an alternate lease agreement. They also require a late night refreshment license from Environmental Health in order to trade.

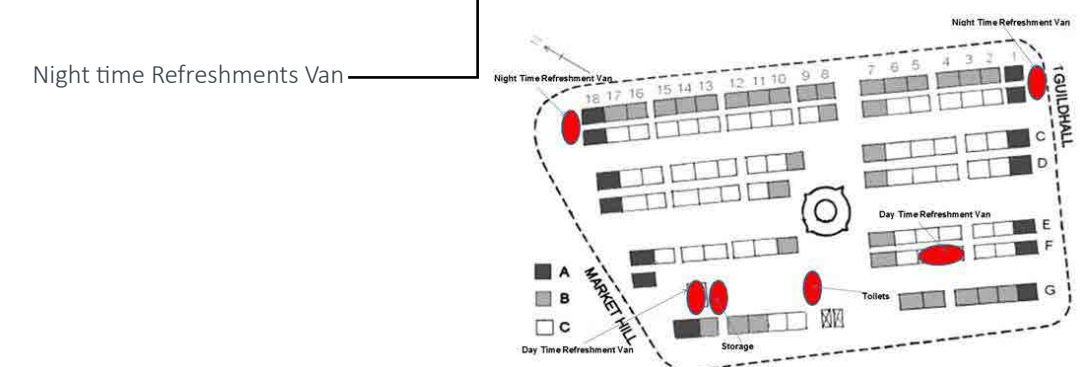
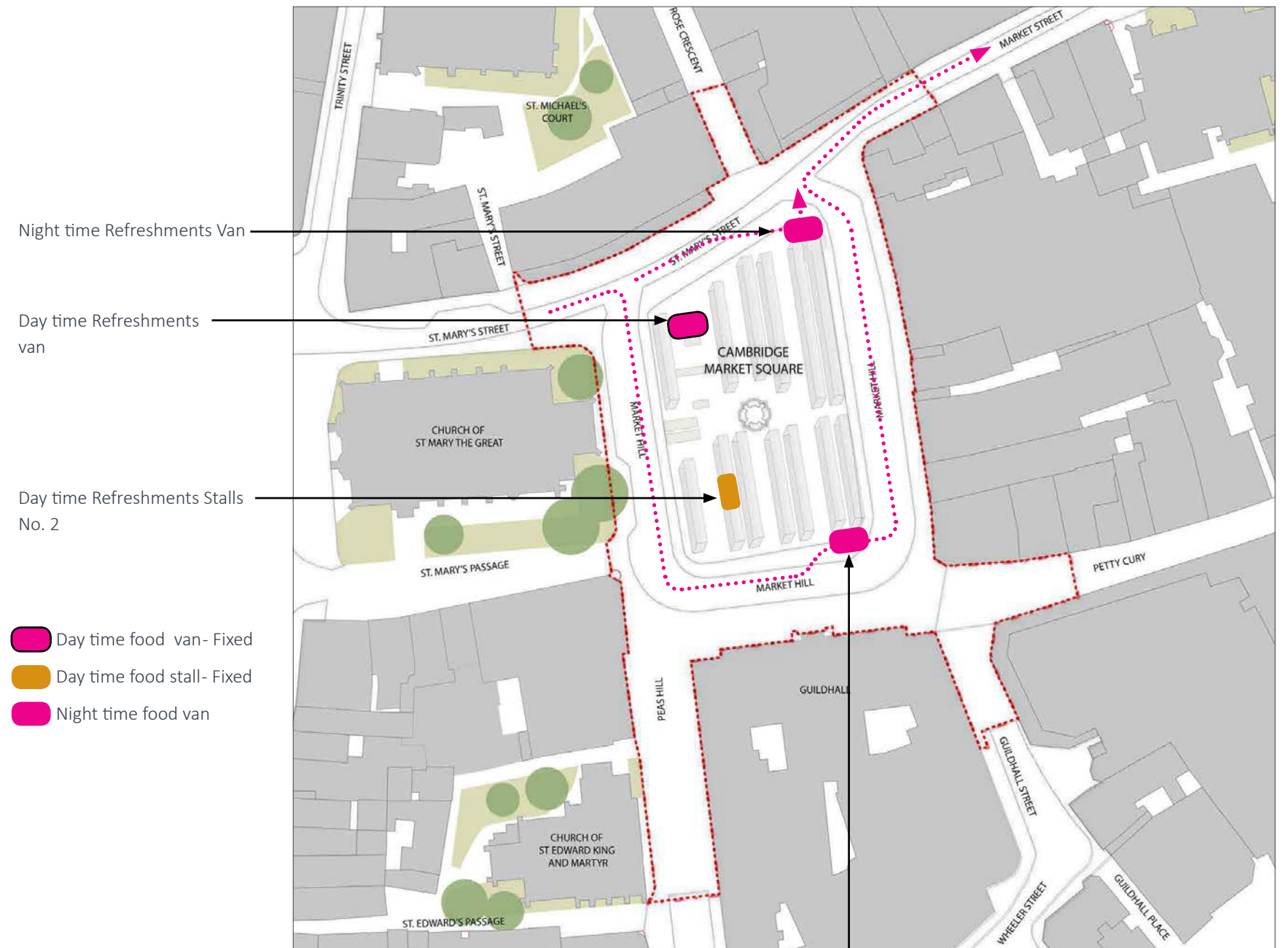
There are a number of conditions which govern the evening food trade within the square as set-out within the Licence To Occupy, these include;

- Fee
- Licence Period – can be brought to an end by either party giving a minimum of 3 months notice.
- Location
- Permitted hours of trading- 7pm to midnight on Sundays and bank holidays; 8pm to 2.30am on other days
- Cleanliness and maintenance

Character of Market Square

Information noted below has been taken from anecdotal sources recorded during the technical stakeholder engagement interviews.

- The main issues relating to the market area at night involve rough sleeping and anti-social behaviour.
- Currently the Market Square is a ‘no-go’ area at night; all stakeholders identified the need to improve the safety.
- There are two food vans which use the square for trading during evening hours. These trucks/vans offer food throughout the night and are the only night-time provision in the immediate area (McDonald’s aside). As a result the Market Square becomes an area where people congregate following the closure of local bars and nightclubs, leading to high levels of disorder.
- There are a number of night clubs which operate within the surrounding area, subsequently the square is used as meeting place after hours.
- Lack of lighting and visibility within the square at night also contributes towards antisocial behaviour occurring.
- Majority of people in the evenings and on the weekends come into the area by public transport and leave by taxi. There is very little night-time bus provision.



Location Plan supplied By Cambridge City Council

4.0 The Square Today

4.11 Waste Management

There is a high provision of litter and mixed recycling bins in Market Square, with the number totalling 15. Most bin locations are to the building façades or pavement edges, however some – such as the ones at the entrance of Rose Crescent – are placed centrally to the footpath, impeding pedestrian movement. The litter bins located around the central fountain have a negative impact on the setting of the listed feature.

Additionally, a number of mobile waste containers and litter/recycling bags can be observed in many location around the square, creating street clutter and generating an impression of untidiness. A refuse compactor, and associated storage container, is located fronting Great Saint Mary's which deal with commercial waste from the market. These structures are visually obtrusive to the setting of the Grade I listed church.



Commercial refuse within street






Commercial refuse within street

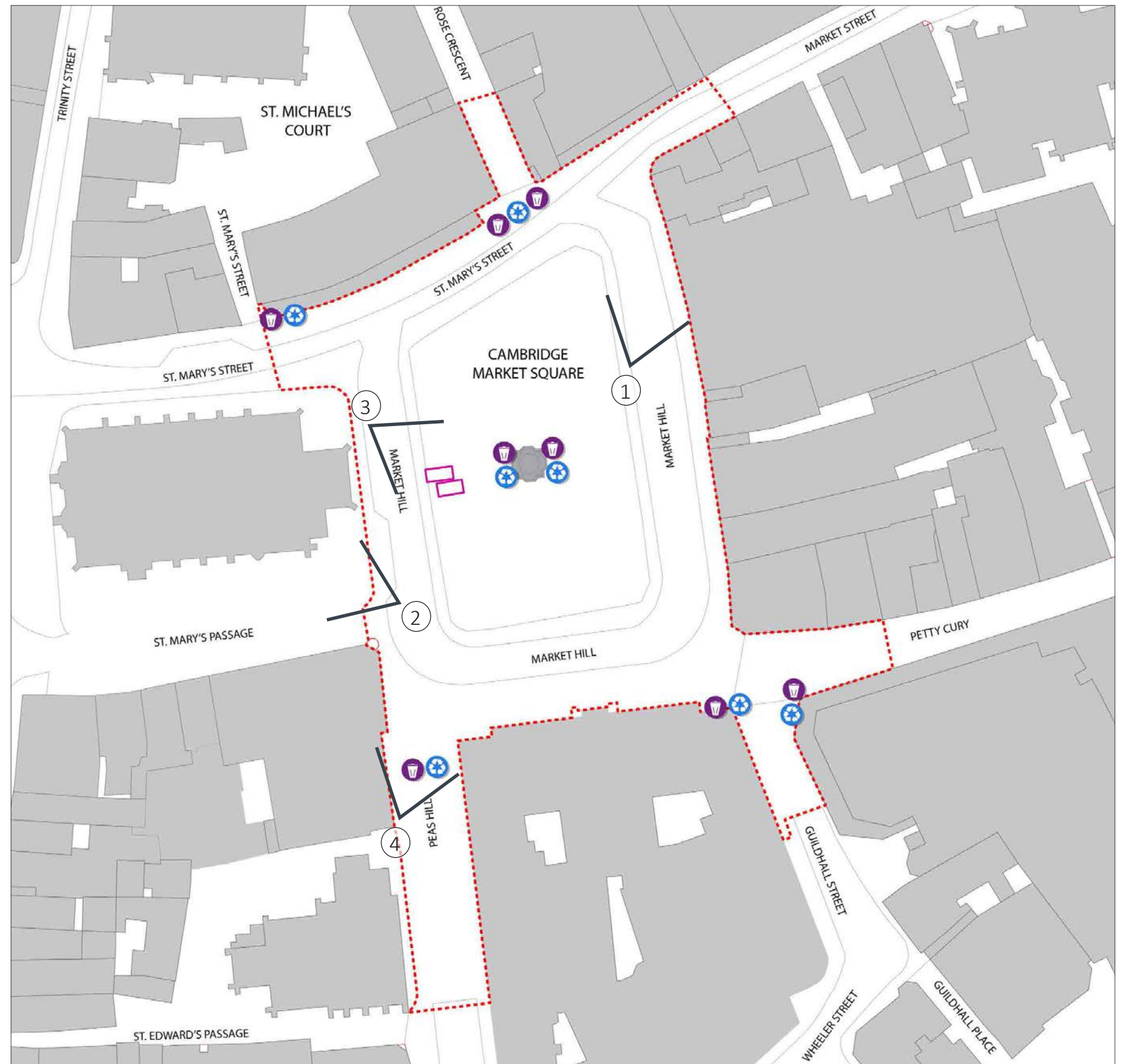


Commercial refuse compactor within the market area



Public refuse containment

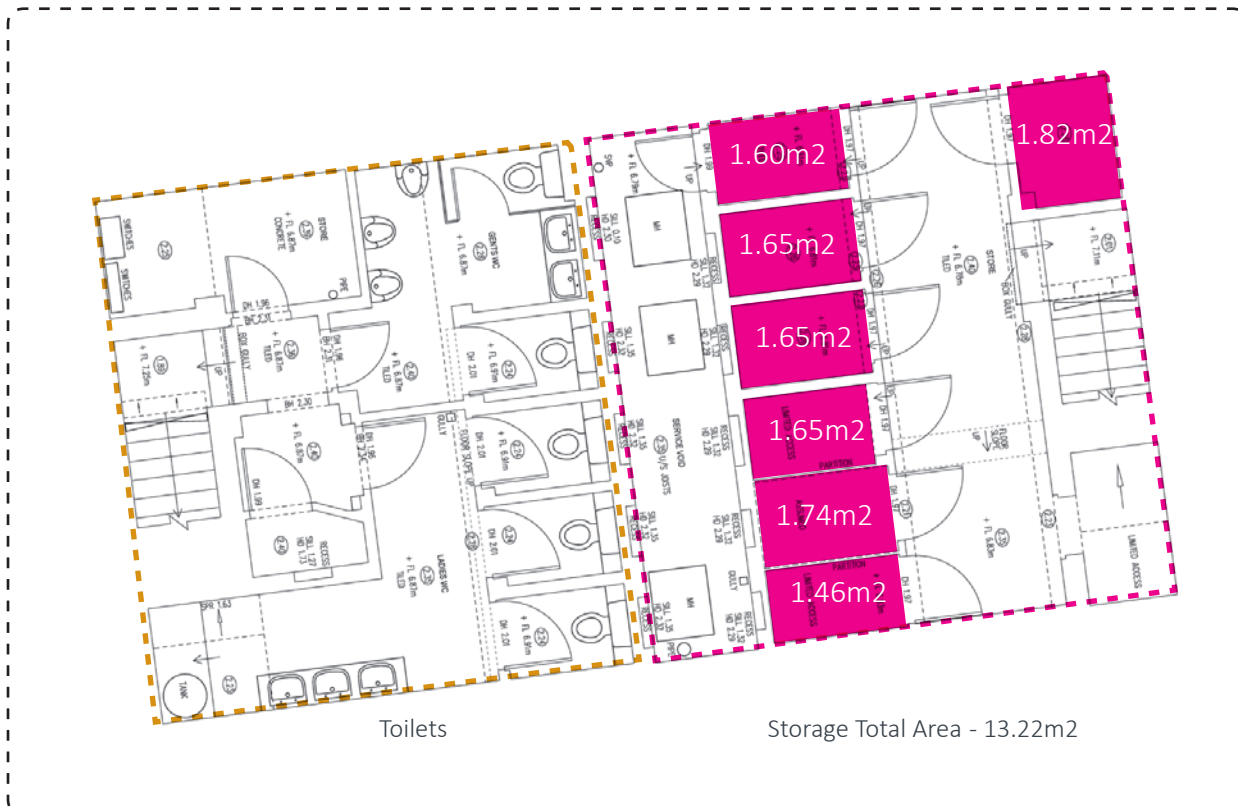
- Bins for mixed recycling- public 
- Litter bins for general waste- public 
- Market waste compactors- commercial 



4.0 The Square Today

4.12 Current Storage

Current trader storage is located below ground, sited within a former toilet block. There are 7 storage rooms currently provided, these storage rooms are for dry goods only. The current condition of these storage areas is poor, with storage units being damp due to ingress of ground water. All 7 storage units are currently allocated to individual traders, allocation is through a first come first serve basis. As such there is no criteria traders are required to fulfil in order to use the facility. The current charge is £18.03 per week per storage room.















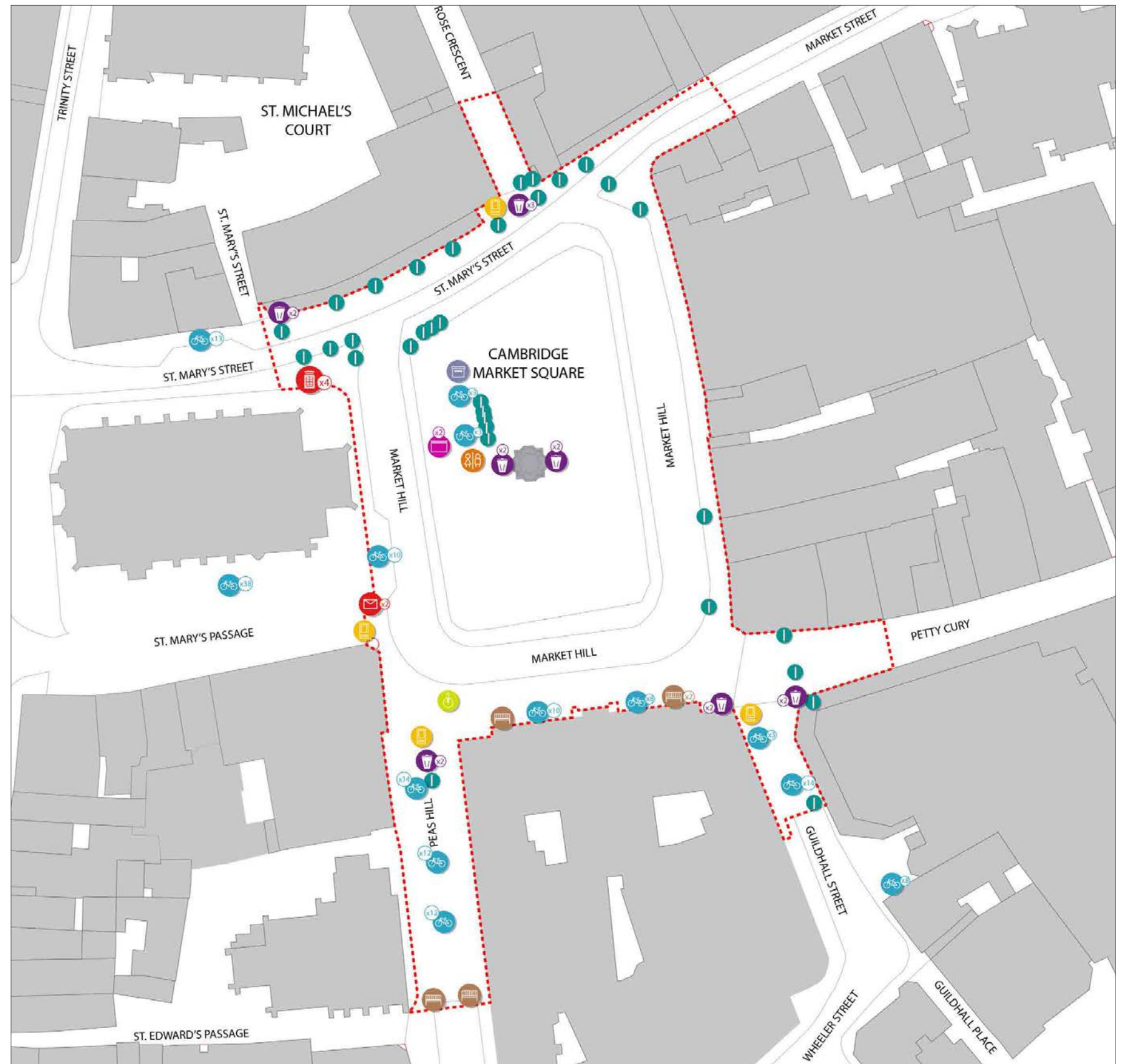
4.0 The Square Today

4.13 Street Furniture

The provision and location of street furniture within Market Square is dispersed and clustered, lacking coordination and a cohesive design strategy. As such there are areas of the square which appear cluttered. A considered furniture palette which is designed appropriately to the character of the square, and coordinated with the use of the space, would reduce street clutter and release public space for other uses.

- Benches: there are 4 benches within the study area and only 2 of these are located within Market Square - positioned against the Guildhall facade along the southern edge of the square within a shaded location.
- Cycle stands: there are 89 cycle stands within the study area and 59 in close proximity of the square, which is a significant provision (a total of 148 stands shown on the adjacent diagram). Nonetheless, many bikes can be seen locked to railings along the edges of the square.

- Telephone kiosks 
- Cycle stands 
- Mail Boxes 
- Benches 
- Orientation totem with map 
- Sculpture 
- Public toilets 
- Litter bins 
- Storage units 
- Market waste compactors 
- Service boxes 
- Bollards 




4.0 The Square Today

4.13 Street Furniture



 Metal benches






 Orientation totem with map



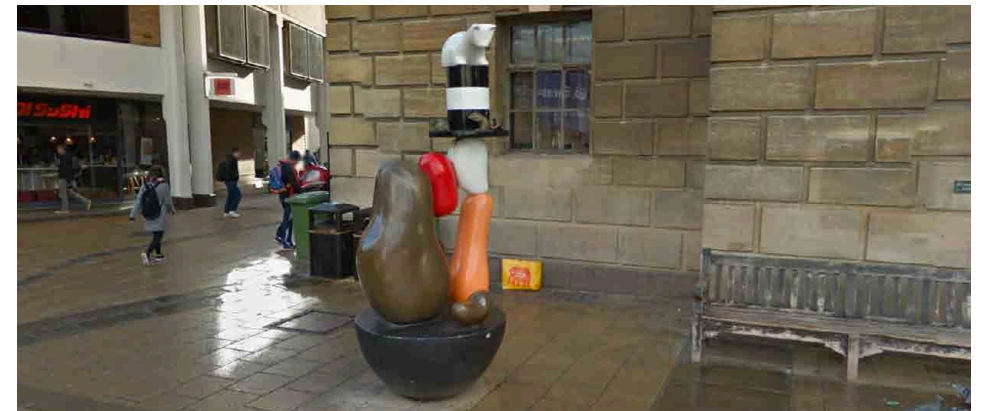
 Cycle stands



   Litter bins (general and recycling), service box and cycle stands




 Mail boxes



 Sculpture



 Market waste compactors



 Bollards



 Timber benches

4.0 The Square Today

4.14 Materials

There is a wide variety of paving materials within Market Square, ranging from high-quality English Pennine stone to lower quality concrete and reconstituted stone surfacing.

Cobbled sett paving is the primary material within the market area of the square. The encompassing highway of Market Hill is surfaced with asphalt. The pavements to the edges of the square, along St Mary's Street and the southern section of Market Hill, and the adjoining streets of Peas Hill and Petty Cury, hold a mixture of English Pennine stone and concrete flag paving. Granite kerbs are seen throughout the space and delineate the edges between pavements and the carriageway of Market Hill and St Mary's Street.

A trial panel of paving, located in the south eastern corner of the square, was constructed during the 1990's as part of a scheme to develop the square. This trial panel of paving was constructed with granite setts to adoptable standards.



4.0 The Square Today

4.14 Materials



Cobble setts



Paving flags - English Pennine Stone



Block paving



Concrete pavers System CPS



Lightwells



Asphalt



Concrete



Bricks mixed with concrete System CPS



Bricks mixed with block paving

4.0 The Square Today

4.15 Lighting

The lighting on Market Square has recently been refurbished and double and single lighting columns have been installed in various locations around the square. In addition, wall-mounted lighting is installed to most of the streets adjacent to Market Square, including Petty Cury, Market Street, Guildhall Street and Peas Hill. These fittings are more contemporary in character and therefore differ from the historical wall-mounted fittings seen along Rose Crescent. The Guildhall facade has feature uplighting installed which acts as a contrast to the regulation lighting located within the street. A singular lighting column, not incorporated within the recent refurbishment works, remains on St Mary Passage and is of a typical highway design. Lighting within the central market space is limited.

CCTV coverage within the square is poor, with only one CCTV camera overlooking the market. Secondary CCTV coverage is associated with shop frontages and controlled by individual businesses, such as the CCTV for M&S along the eastern side of the square.



Double lighting posts
DW Polar 500 Lantern
140W CPO-TW Lamp
8m high- RAL 9005
(Jet Black)

Single lighting posts
DW Polar 500 Lantern
140W CPO-TW Lamp
8m high- RAL 9005
(Jet Black)

Road lighting column with
single bracket arm



Historical wall-mounted
lighting

Contemporary wall-mounted
lighting

CCTV



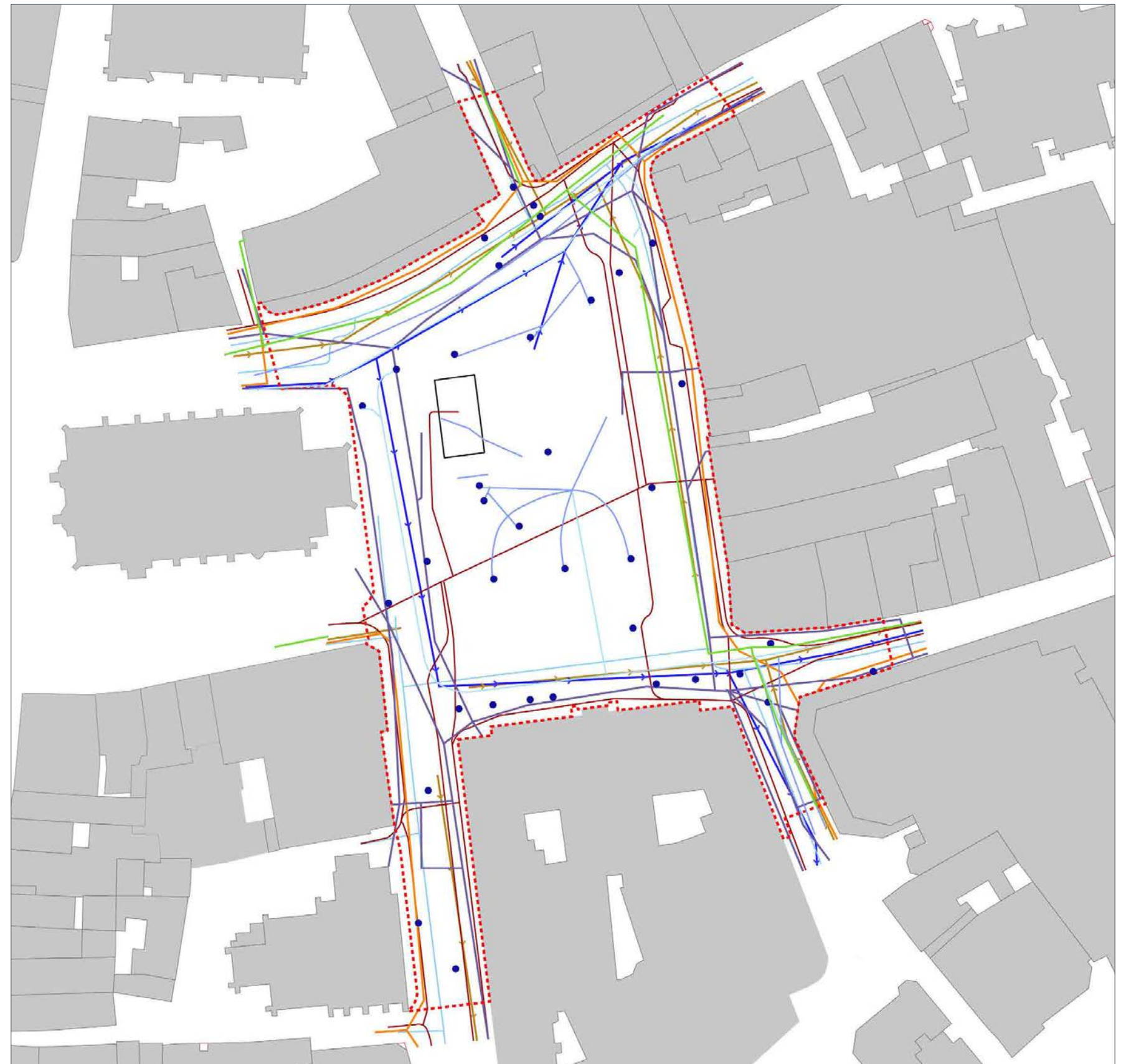
4.0 The Square Today

4.16 Utilities

The below-ground utilities shown on the adjacent diagram have been positioned through a process of on-site analysis, and a review of the topographical survey data overlaid with the C2 record information, both supplied and procured by the City Council. As such the positions shown are indicative and will require ground penetration radar surveyance at RIBA Stage 02/Stage 03.

The adjacent diagram indicates the locations of power lines, ducts, sewers and drainage. The utilities indicated are located mostly within the perimeter of the square and the carriageway of Market Hill and St Mary's Street, with the exception of some UKPN cables and ducts which cross the central area of the square.

- BT lines - Openreach
(survey report issued on the 06.11.2018)
- Virgin Media ducts and trenches
(survey report issued on the 08.11.2018)
- UKPN distribution cables and ducts
(survey report issued on the 06.11.2018)
- Water mains - Cambridge Water Company
(survey report issued on the 06.11.2018)
- Foul sewers - Anglian Waters
(survey report issued on the 06.11.2018)
- Surface sewers - Anglian Waters
(survey report issued on the 06.11.2018)
- Basement with toilet blocks
- Gas Mains - Cadent
(survey information issued 01.05.2019)



4.0 The Square Today

4.17 Levels and Drainage

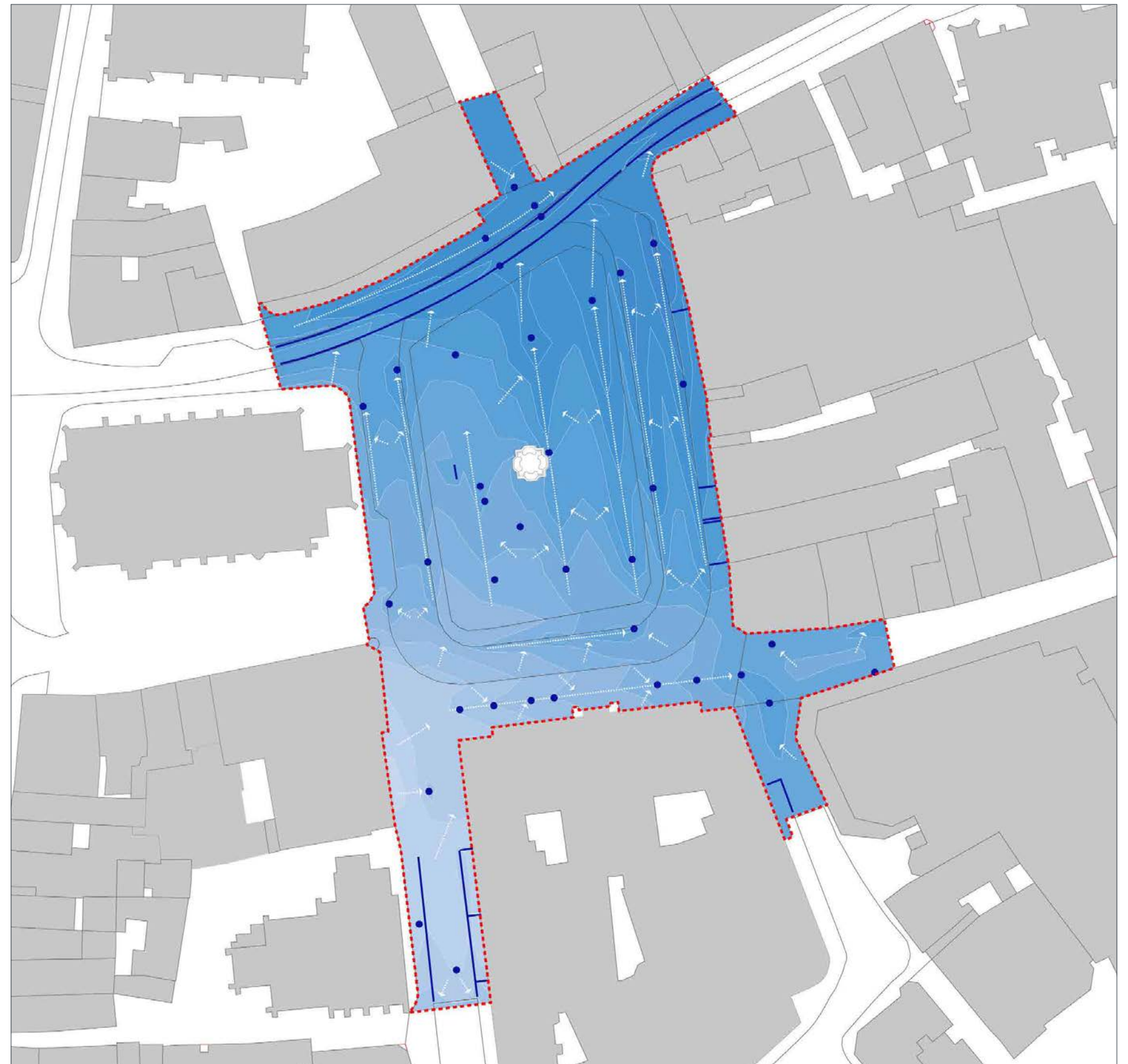
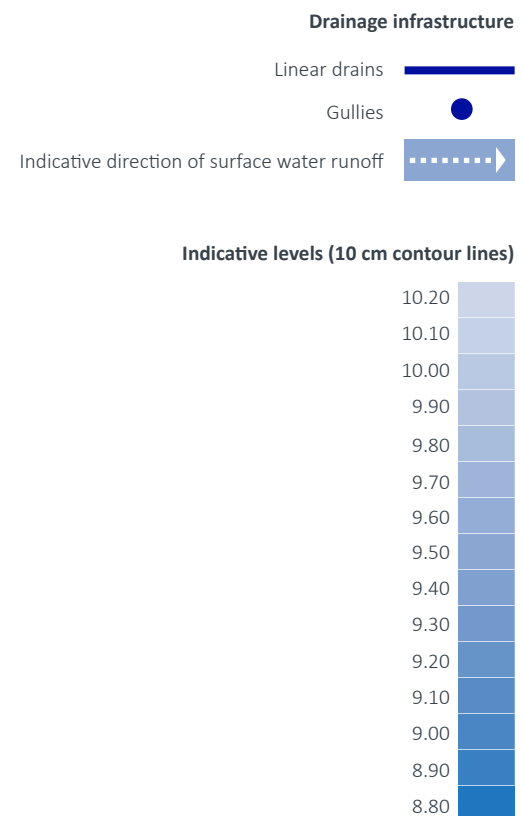
The general surface falls across Market Square flow in a northerly direction, with a slight camber to the central market section of the square. This central camber allows for an accompanying east-west flow of surface water. Gullies can be observed along the kerbside of the carriageway and within pedestrian areas. Where falls are negligible the use of linear drainage channels has been adopted within the public highway.



Bottom of kerb gully and gully on pedestrian area



Linear drains



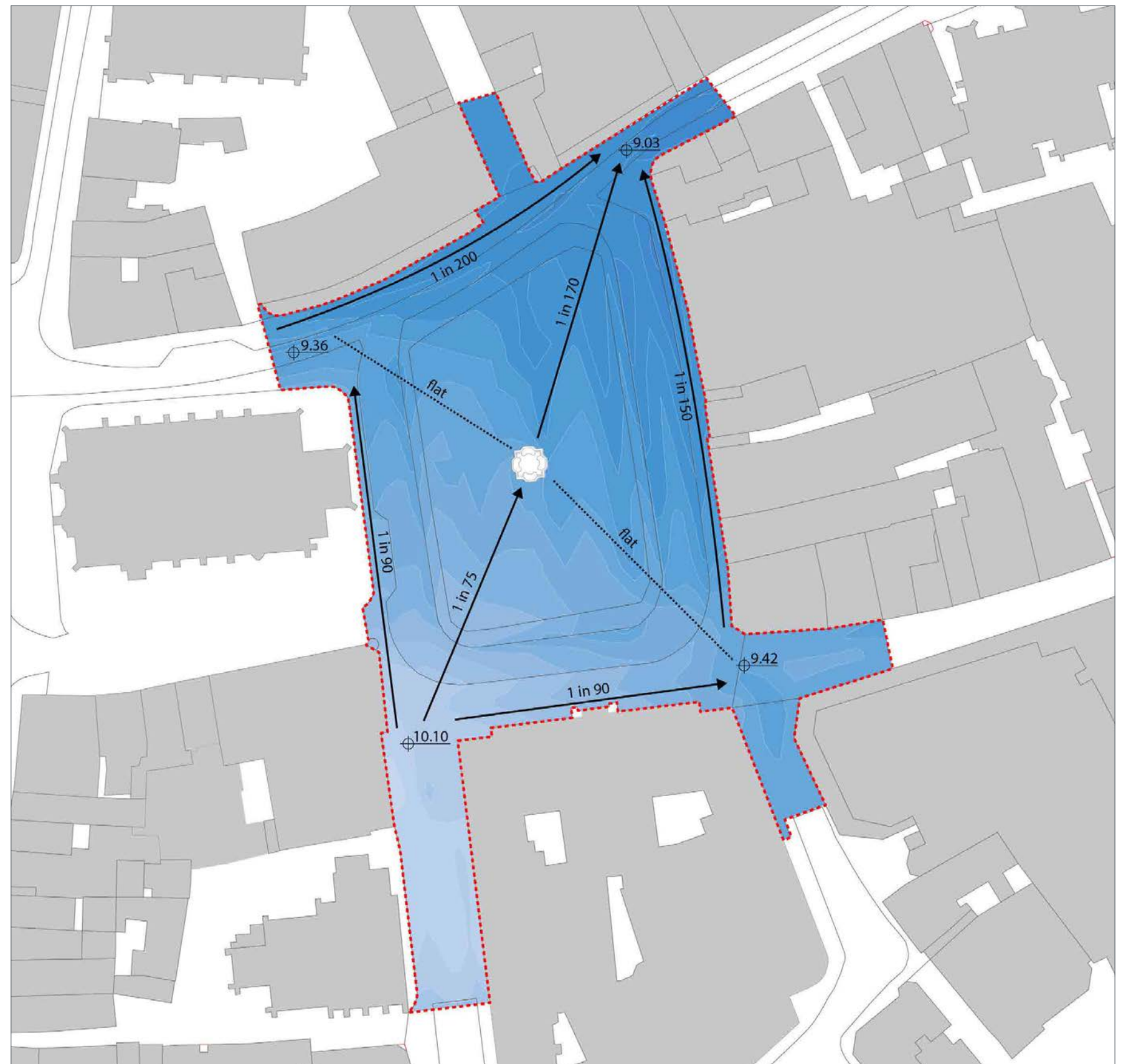
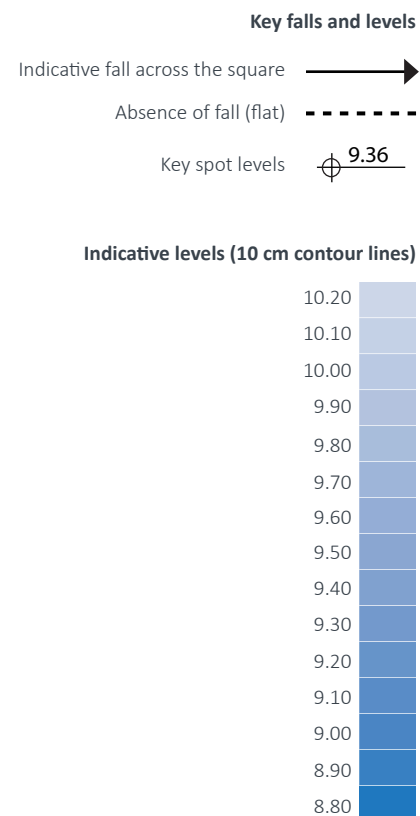
4.0 The Square Today

4.17 Levels and Drainage

The overall change in datum across Market Square is approximately 1m and 1.40m across the whole of the study area. Generally falls go from the south-western corner of the square towards the north-eastern corner. The north-west to south-east axis across the square is level (a fall of 1 in 400).

None of the gradients across the square generate accessibility issues, however the relative flatness of the square may cause drainage issues and ponding of surface water.

Anecdotal information has indicated that the current drainage system overflows and is prone to flooding. This flooding is compounded by the use of jet-washers which are used to clean the paving after market trading. It is recognised, through anecdotal information acquired, that the existing gullies and channels are nearing capacity. It is therefore recommended that an assessment/survey of the structural integrity of the existing drainage system is undertaken prior any improvement works to the pavement surface.

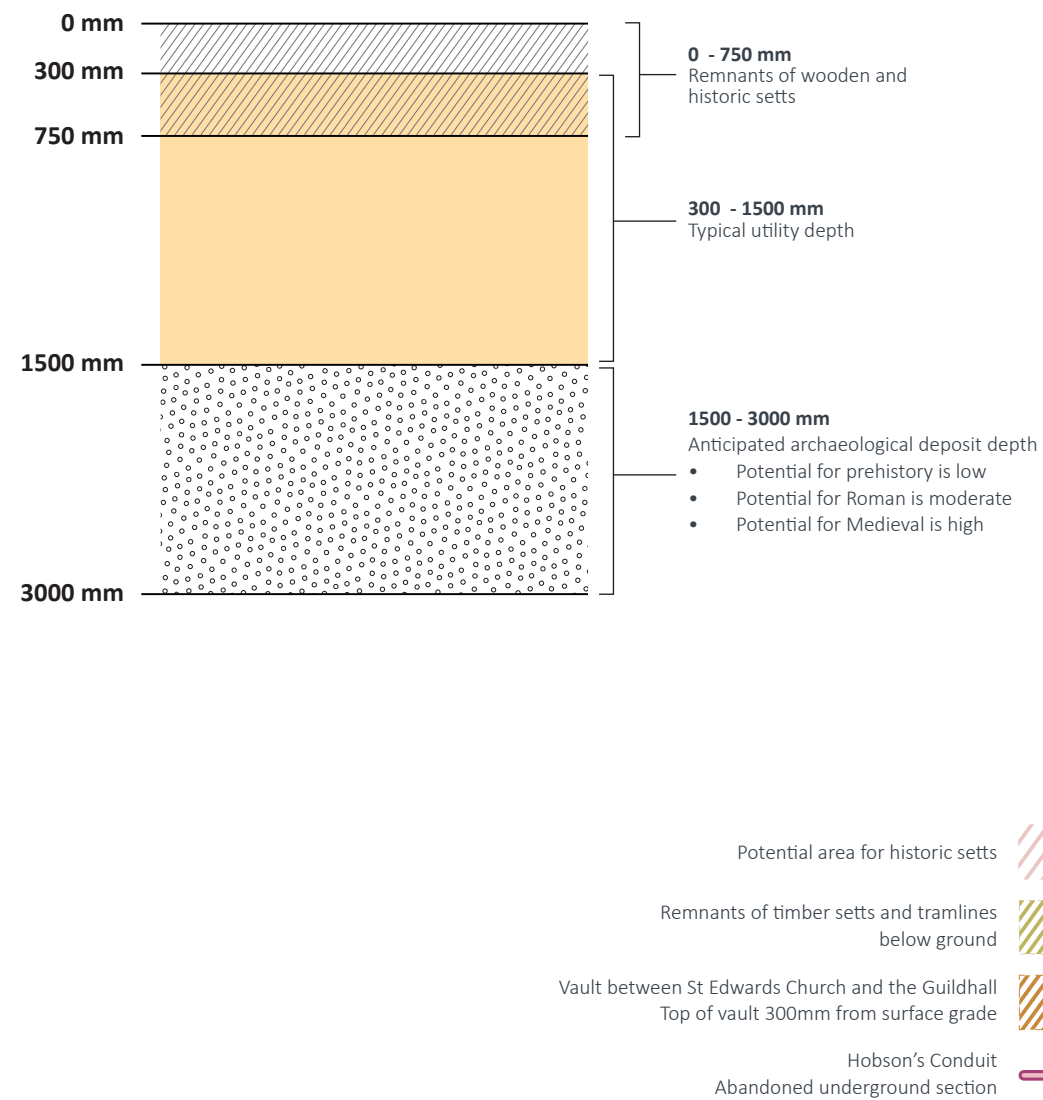


4.0 The Square Today

4.18 Archaeology and Historical Features

The use of Market Hill dates from the late Saxon period. Investigations in 1902 indicated that little of the earliest remains have survived, with most features seen being 17th century or later. However some Medieval pottery was found. It was also noted that the area was covered with an irregular layer of made ground, which may have protected some earlier, deeper deposits (Historic Core Appraisal).

One of the most significant historical features of Market Square is the remnant underground section of the Hobson's Conduit. This conduit was built in the 17th century to bring fresh water into the City of Cambridge. A branch of the Hobson's Conduit brought fresh water directly to the centre of Market Square, where a monument was erected. This was then removed in 1855 and replaced by the current fountain. The original monument now sits at the corner of Lensfield Road.






4.0 The Square Today

4.20 Planting and Ecology

Located near to Market Square, the Backs are a stretch of Grade I historic parks and gardens which run along the backs of the colleges and the edge of the River Cam. Each of these 'greens' varies in size and landscape character. St John's College was notably designed by the famous landscape architect Lancelot 'Capability' Brown. The greens are privately managed and maintained by the Colleges.

The most significant publicly accessible green spaces in Cambridge city centre are Christ's Pieces, Jesus Green, Midsummer Common and Parker's Piece. The closest from Market Square is Christ's Pieces, located approximately 300m east from the study area. Christ's Pieces is a 2018 Green Flag award winning Victorian park designed with tree-lined avenues. Within Market Square itself there is limited vegetation and planting, however significant mature trees can be observed fronting the colleges along Kings Parade. Three specimen trees are planted within the private land of the Church of St Mary the Great on the western edge of the square.

-  Privately owned green spaces
-  Publicly accessible green spaces
-  Cambridge Market Square



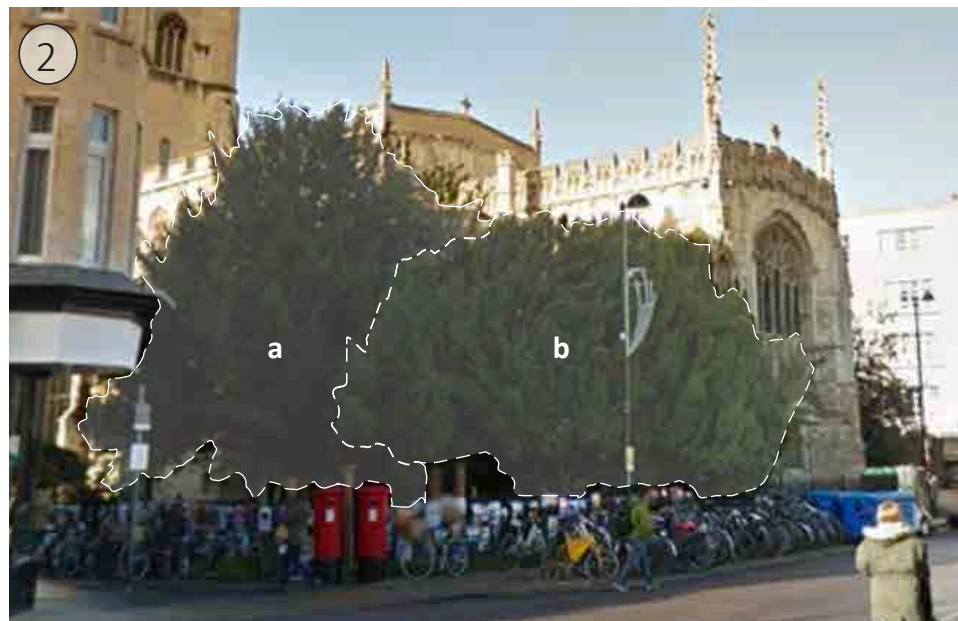
4.0 The Square Today

4.20 Planting and Ecology

Planting species on Cambridge Market Square



- a.** Located on the north-east corner of the Church of St Mary the Great is an approximately 6 to 8m high native holly (*Ilex aquifolium*). It is an evergreen tree with a low and spreading canopy.
- b.** *Phormium tenax*, approximately 1.5m high.
- c.** Two young *Taxus baccata fastigiata*, approximately 2 to 3m high.



- a.** Located on the south-east corner of the Church of St Mary the Great is a mature *Taxus baccata*, approximately 8 to 10 m high. Evergreen, widely spread low canopy. It is an evergreen tree with a low and spreading canopy.
- b.** Mature *Taxus baccata fastigiata*, approximately 8m high. Evergreen, widely spread low canopy.

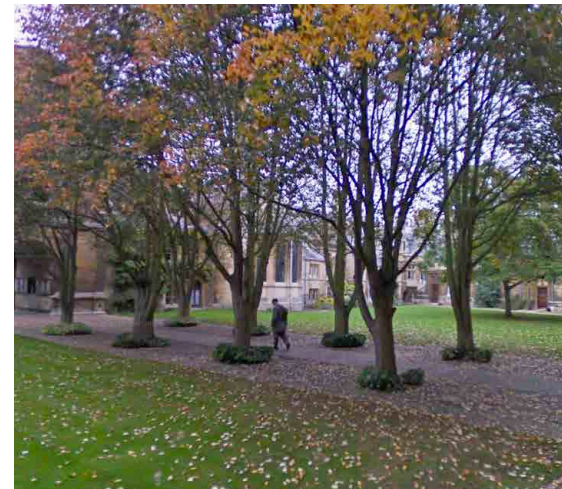
Examples of tree planting typology in the Cambridge city centre core area



Sussex Street



Trinity Hall - Latham Lawn



Caius and Gonville College - Tree Court



Jesus Green



Trinity Street



Trumpington Street - entrance of St Catharine's College

Single feature tree

- Use of one single mature feature tree.
- Tree located in a central position in a defined space such as a courtyard.
- Anchor views, contributing towards wayfinding within the city.
- Common species in the university's grounds.

Avenues

- Trees used to define one or two edges of a path through a green space.
- The avenue frames views and delineates routes.
- Enhances perspectives, contributing towards wayfinding within the city.
- Common species in the university's open grounds and gardens.

Trees framing a building

- Trees used to define a key view or an approach to a building, usually its main facade or entrance.
- Formal planting type, complementing architectural form and detailing.
- Common species in the university's open grounds and gardens.

5.0

Key Constraints

- 5.1 Transport, Movement and Access Summary
- 5.2 Key Constraints: RAG Table
- 5.3 Main Access and Movement Constraints
- 5.4 Main Public Realm Constraints

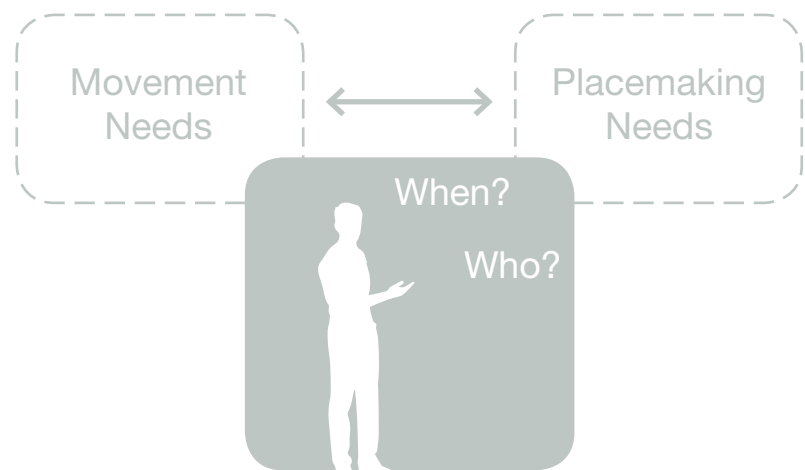
5.0 Key Constraints

5.1 Transport, Movement and Access Summary

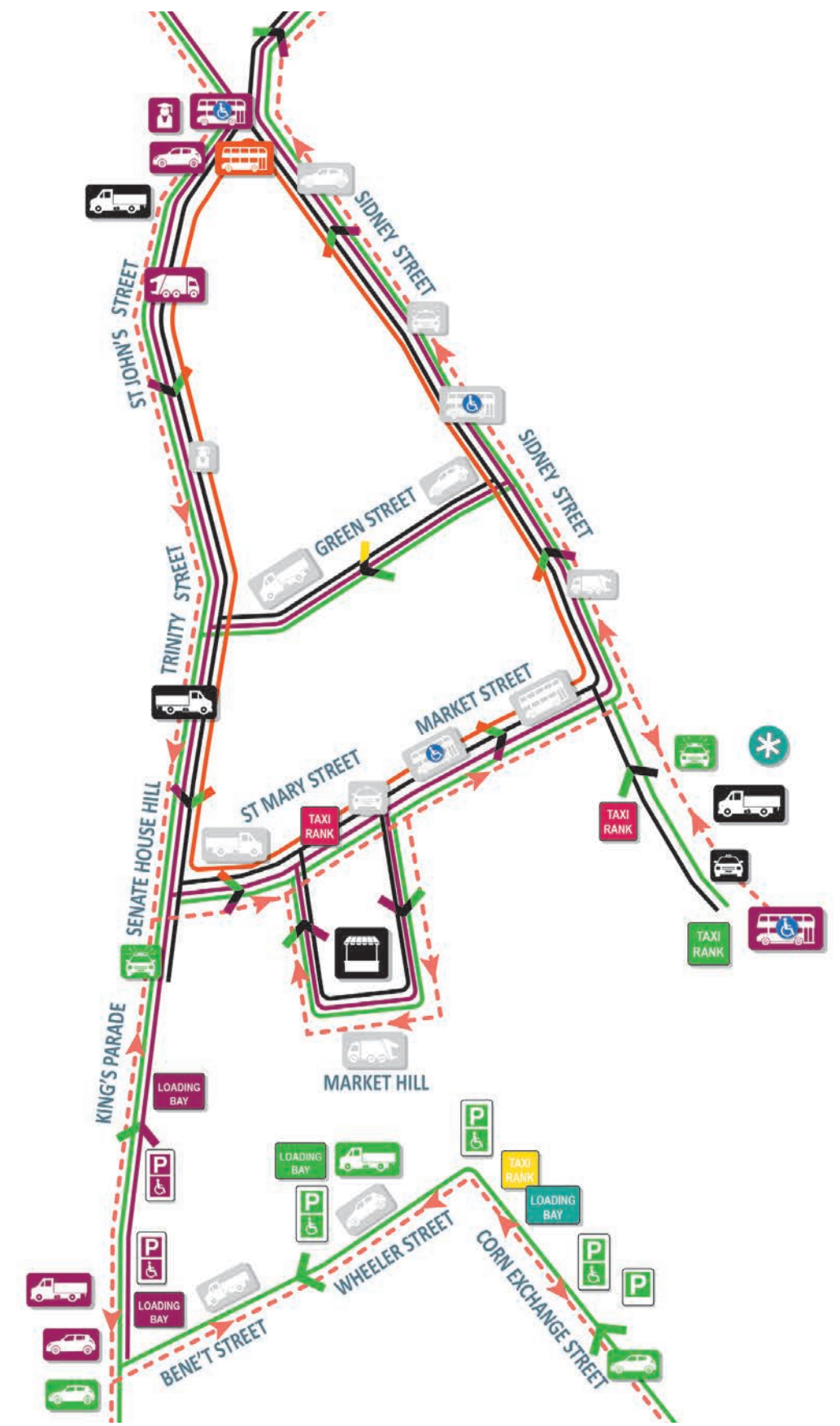
This schematic plan aims to summarise the complex traffic management measures, types of vehicles, associated range of movements, and waiting, loading and parking activities that currently take place within in Market Square area on a weekday and weekend.

The impacts of these existing arrangements in and around Market Square are summarised in the following page through a Red Amber Green (RAG) matrix.

In summary and in line with the emerging SPD "Making Space for People", there is an opportunity to re-think the existing traffic management, access and movement arrangements in and around Market Square to improve legibility and respond to existing and future needs in a more holistic and sympathetic manner. This would help in providing greater pedestrian and cyclist access, movement and enjoyment of the streets and spaces.



| | | | | | |
|-------------------------------|--|--|--|------------------|--|
| Emergency vehicles | | Taxi/Licensed hire vehicles | | 4 pm - Midnight | |
| Maintenance / Refuse vehicles | | Market operations | | Midnight - 10 am | |
| Delivery vehicles | | College staff/Maintenance | | Permit holders | |
| Accessible vehicles | | Taxi rank | | Anytime | |
| Sightseeing bus | | Loading bay | | Sunday only | |
| Other motor vehicles | | Accessible Parking (Blue badge holders only) | | 7am - 7pm | |
| | | Grand Arcade Car Park | | 7pm - 7am | |
| | | For Petty Cury only | | 7pm - 6am | |
| | | | | Cycle routes | |



A schematic plan to demonstrate the complex traffic management and associated impacts on Market Square

5.0 Key Constraints

5.2 Key Constraints: RAG Table

The aim of this section is to summarise how well Market Square and its surrounding streets currently perform in terms of important movement and placemaking objectives using a straightforward Red-Amber-Green approach.

The RAG assessment takes into account the desktop study, available survey and data, technical stakeholder discussions and site visits, as well as professional judgement and extensive experience from similar projects.

This assessment is seen simply as a 'tool' to aid understanding, identify issues and potential opportunities and further considerations in a systematic manner.

The summary RAG plan and supporting RAG table summarises the existing performance of Market Square and surrounding area, where red indicates poor performance, amber is average performance and green is good performance.

Across the important movement and placemaking objectives, the current performance assessment indicates that neither movement or

placemaking objectives perform well, with the worst performing areas being Market Square, Market Hill and Peas Hill. The existing performance in support of pedestrians and the quality of the public realm are particularly poor.

The following poor performing indicators include:

Street Clutter

- The amount of street clutter that impacts on movement, accessibility and enjoyment of the space for pedestrians.

User Interactions

- User interactions and conflicts due to the presence of motorised vehicles within this constrained space.
- Cycle movements on non-permitted routes were taken into consideration.

Personal Security

- It is perceived as a 'no go area' after dark, where anti-social behaviour can become an issue.

Quality of the Public Realm

- The quality of the materials, street furniture, lighting and signing are poorly maintained and do not represent the iconic importance of this location appropriately.



Poor
Average
Good
n/a = not applicable





| | | 1. Market Square | 2. Market Hill | 3. St Mary Street | 4. St Mary's Passage | 5. Market Street | 6. Petty Cury (and part of Guildhall Street) | 7. Peas Hill 1 | 8. Peas Hill 2 | 9. Senate House Hill | 10. King's Parade | 11. Sidney Street |
|-------------------------------|---|------------------|----------------|-------------------|----------------------|------------------|--|----------------|----------------|----------------------|-------------------|-------------------|
| Pedestrians | Footway effective width | Red | Red | Red | Yellow | Yellow | Yellow | Yellow | Yellow | Yellow | Red | Yellow |
| | Permeability | Red | Red | Green | Green | Green | Green | Green | Green | Green | Red | Green |
| | Obstructions (e.g. street clutter) | Red | Yellow | Yellow | Red | Red | Green | Red | Red | Green | Red | Yellow |
| | User conflict (e.g. vehicles, cyclists) | Red | Red | Yellow | Red | Red | Yellow | Red | Red | Green | Red | Yellow |
| | Accessibility | Red | Yellow | Green | Yellow | Yellow | Green | Yellow | Red | Green | Red | Yellow |
| Personal security | Red | Yellow | Yellow | Red | Red | Yellow | Red | Red | Red | Green | Red | Yellow |
| Cyclists | Cyclist permeability | n/a | Red | Yellow | n/a | Yellow | n/a | n/a | Red | Yellow | Yellow | Yellow |
| | Cyclist safety | n/a | Red | Yellow | n/a | Yellow | n/a | n/a | Red | Yellow | Yellow | Yellow |
| | Cyclist wayfinding | n/a | Red | Green | n/a | Yellow | n/a | n/a | Red | Yellow | Yellow | Green |
| | Cycle parking | Yellow | Yellow | Green | Green | Red | Green | Green | Green | Red | Yellow | Green |
| Traffic & Road Safety | Traffic movement | n/a | Red | Yellow | n/a | Yellow | n/a | n/a | Red | n/a | Yellow | Yellow |
| | Traffic speed | n/a | Yellow | Yellow | n/a | Yellow | n/a | n/a | Yellow | n/a | Yellow | Yellow |
| | Road safety | n/a | Red | Yellow | n/a | Yellow | n/a | n/a | Red | n/a | Yellow | Yellow |
| | Signing and regulations | Red | Yellow | Yellow | n/a | Yellow | n/a | n/a | Yellow | n/a | Red | Red |
| Parking and Loading Provision | Parking provision | n/a | n/a | n/a | n/a | n/a | n/a | n/a | Yellow | n/a | Green | n/a |
| | Loading provision | n/a | Yellow | Red | n/a | Red | n/a | n/a | Green | Yellow | Green | Yellow |
| | Market traders' loading provision | Red | Red | Red | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| | Taxis | n/a | n/a | Green | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Public Realm | Quality of materials | Yellow | Red | Yellow | Yellow | Red | Red | Yellow | Red | Green | Green | Yellow |
| | Quality of street furniture | Red | Red | Yellow | Yellow | Red | Red | Yellow | Red | Green | Green | Yellow |
| | Character | Yellow | Yellow | Yellow | Green | Yellow | Yellow | Yellow | Red | Green | Green | Yellow |
| | Wayfinding / legibility | Red | Red | Green | Green | Yellow | Yellow | Green | Red | Green | Green | Yellow |
| | Lighting | Red | Yellow | Yellow | Yellow | Yellow | Green | Green | Yellow | Yellow | Yellow | Green |
| Maintenance | Red | Yellow | Yellow | Yellow | Yellow | Yellow | Yellow | Yellow | Yellow | Yellow | Yellow | Yellow |

5.0 Key Constraints


5.3 Main Access and Movement Constraints

This diagram summarises the main access and movement issues and constraints identified that will require further consideration in subsequent design stages, engagement and consultation.




Traffic Management & Vehicular Access

-  It is unknown how many and for whom permits have been issued to enable special access to the Market Square and surrounding streets. Several vehicles can be found within the restricted area. This impacts on pedestrians and cyclist access, movement and enjoyment. It also could pose a potential security issue.
-  The existing traffic management signage is insufficient to provide for the existing needs of the street for all road users and security management.
-  There are no traffic management measures in place to control vehicle access and movement to the south of Market Square. This lack of management impacts on pedestrians, cyclists, road safety and security.
-  Vehicular presence (including buses and large delivery vehicles) impacts on pedestrians and cyclists.



Parking & Loading

-  Parking and loading activities can impact on pedestrians and cyclist access, movement, enjoyment of the space and road safety.

Pedestrians

-  Narrow footways, inconsistencies in the quality of footway materials, level changes and street clutter can make it challenging for pedestrians with visual and mobility impairment. These areas can become isolated and unwelcoming after dark and encourage anti-social behaviour.
-  Areas where tourists tend to congregate causing issues for other users.
-  The market layout and clutter make it difficult for pedestrians to navigate, move around with ease and enjoy the market.

Cyclists

-  Cycles parked against street furniture including railings and signposts impacts on pedestrian accessibility.
-  Cycle parking on Peas Hill, Guildhall Street & St Mary's Passage impact on the use of these spaces and connectivity into the market square space.



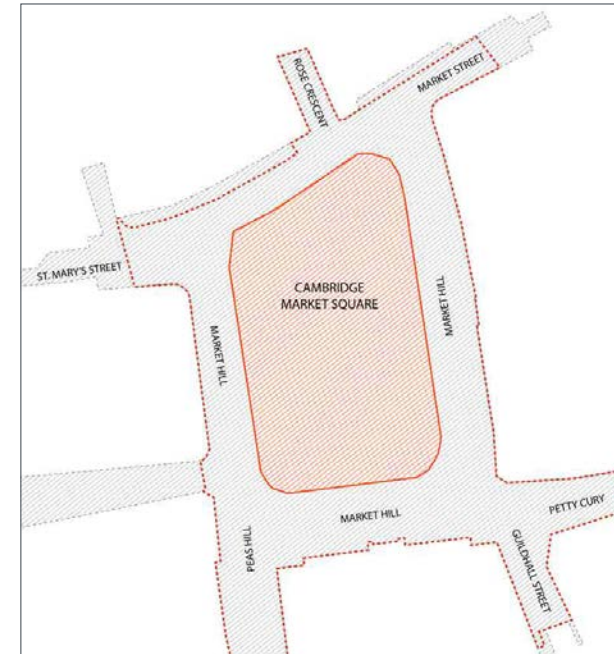
5.0 Key Constraints

5.4. Public Realm Constraints

Listed below are the main constraints for the public realm. These constraints have been identified through the analysis process and will need further consideration in subsequent design stages.

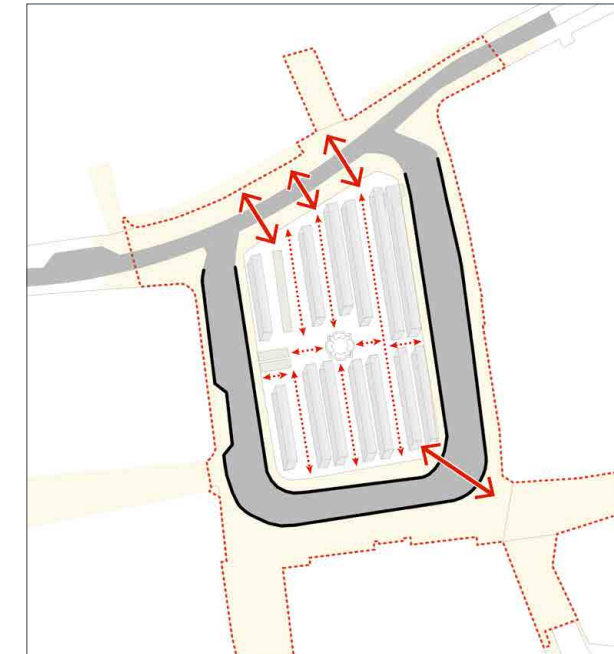
- As a prohibited street for trading, Market Hill requires legal agreement for any potential change in its use. Despite this, Market Hill is a key opportunity space for the square.
- Public space is restricted by the encompassing carriageway of Market Hill, the density of the current market and the unnecessary street clutter which is prevalent in certain areas of the square.
- Key views to listed buildings are restricted by the configuration of the market and the visually obtrusive refuse compactor.
- Listed buildings and features are not celebrated and the Grade II listed fountain is concealed by the configuration of the market.
- Reference to the square's history and legacy as a centre point for the City of Cambridge is hidden behind the operations of the market and the current design of the public realm.
- Pedestrian permeability is difficult and non-intuitive. No accessible route exists within the market and the current road profile incorporates raised kerbs which obstruct wheelchairs.
- The permanent structures of the market do not allow for alternative uses to be accommodated beyond trading times.
- The current stall design causes maintenance/cleaning issues.
- Issues with anti-social behaviour occur within the square at night.
- There is a lack of seating within the square, limiting the opportunity for residents and visitors to dwell and spend time within the space.
- The condition of the existing setts to the centre of the square are a key constraint in terms of public accessibility and cleaning/ongoing maintenance.

Ownership



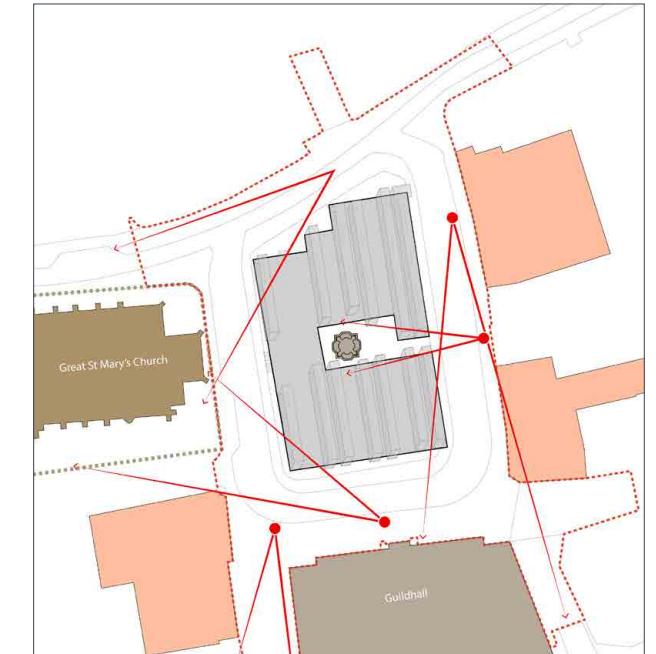
- Market Square - trading restrictions are in place within the surrounding streetscape. The rededication of the public highway should be considered in order to unlock space.

Accessibilities



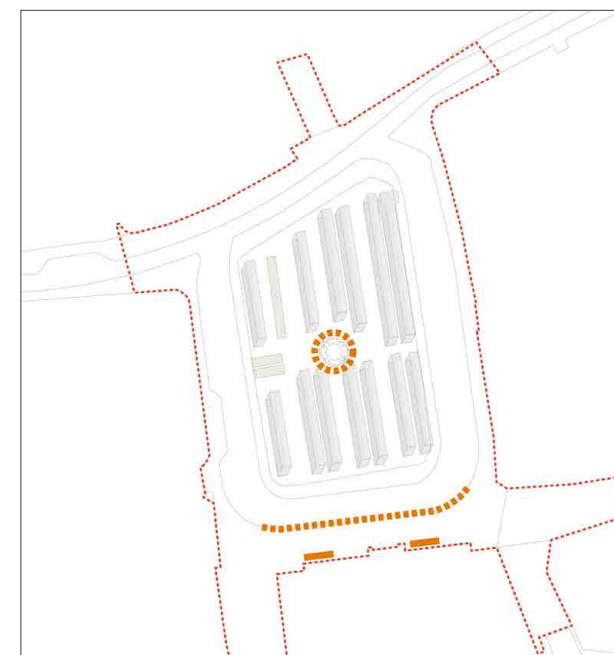
- Non-intuitive pedestrian access and no accessible compliant routes exist through the market.

Views



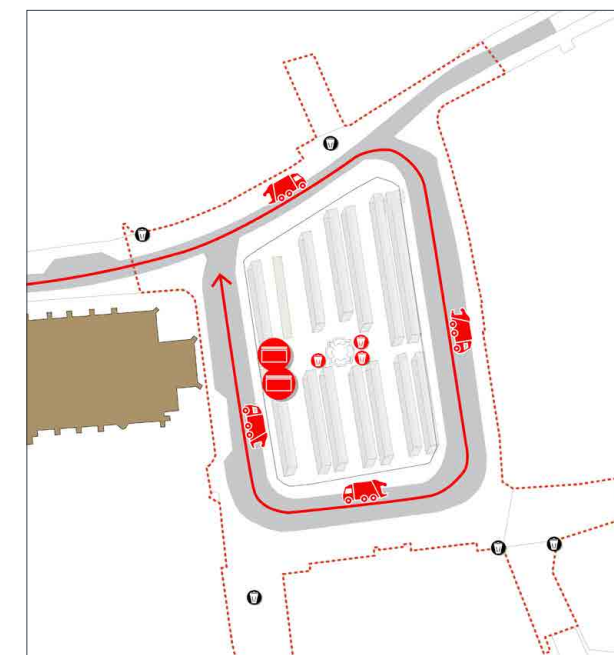
- Market stalls are cramped and restricted.
- Views to listed buildings and features are obscured.

Seating



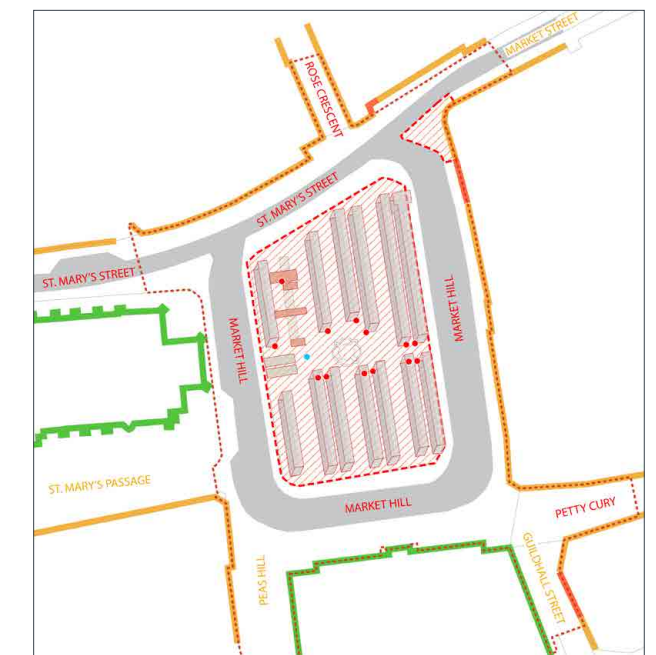
- There is limited provision of seating and spaces for people to dwell.

Waste Management



- Waste collection is a prominent feature of the square.
- Waste compactors and bins obstruct views and access to the listed church and fountain.

Flexibility



- Market "island"; the square is confined by the carriageway.
- The configuration of power and water within the square restricts the flexibility of the market.

| | | | |
|--|--|--|--|
| Paved footways & streets | | Refuse collection flow | |
| Vehicular access | | Market refuse compactors & litter bins | |
| Raised kerbs | | Streets under consent for market trading | |
| Narrow pedestrian alleys through the market | | Streets prohibited for market trading | |
| Flush kerbs allowing inclusive access | | Area under consent for market trading | |
| Listed buildings & buildings of local interest | | Water tap | |
| Key views across the square | | Electricity points | |
| Informal seating (kerbs and upstands) | | Passive grandeur | |
| Formal seating (benches) | | Existing active frontage | |
| | | Potential active frontage | |

6.0

Market Assessment

- 6.1 SMART Cities and Growing Trends
 - 6.2 The Market Today
 - 6.3 Current Regulations
 - 6.4 Key Constraints
 - 6.5 Opportunities and Recommendations
 - 6.6 Market Occupancy
 - 6.7 Stall Design
 - 6.8 Market Canopy
 - 6.9 Below Ground Refuse Containment - Case Study
 - 6.10 Below Ground Cycle Storage, a Case Study For Cambridge
-

6.0 Market Assessment

6.1 Market Assessment: SMART Cities and Growing Trends

This section of the study is a high-level assessment of the market today, its regulations, needs and requirements. Within the timescales of this project, changes in consumer behaviour, lifestyles and technology could have a profound effect on the way the space and associated market currently works. Already increasing numbers of people are using apps to review, plan and sometimes book their visits to Cambridge and Market Square. It is therefore important that current and future technological advances in smartphone apps contribute positively to the aims of the project and the future of the market.

This could include:

- Easy-to-use journey time planners and real-time information to enable local people and visitors to Market Square to plan their visits using more active, efficient and sustainable travel options.
- 'Digital inclusion' technology to enable disabled people who may have fewer journey options to have a greater choice on when and how they can access the area at different times of the day/week.
- Technology to enable changes in the way goods are delivered and servicing activities are undertaken in the area. Such technology should aim to include time, emissions, road hazards and other factors to be monitored in an integrated way.
- Smart signs and intelligent transport systems to manage the types and times vehicles can enter the area without the need for extensive restrictions and related signing.
- Vehicle technology including prioritising low/zero emission and quieter vehicles over other vehicles entering the area.
- A smart parking system to enable a more flexible approach to parking (and loading) to reduce the negative impacts of vehicles and associated infrastructure on other road users and local air quality.
- A city-wide cycle hire scheme and associated technology to reduce the negative impacts of private cycle parking on the historic streets and spaces.
- Supporting local taxis with technological advances to help maintain and enhance service standards, facilitate customer feedback and further improve the customer experience.
- Utilising artificial intelligence-based analysis and learning to support the local economy, including location data and insights on spending to help predict and prepare for unforeseen shifts in demand and behaviour.
- Interactive events where smartphone applications allow visitors to see live event programmes, preview performances and live music shows, or interact with the environment through augmented reality. A 'Visit Cambridge Application' is already in use.
- Intelligent visitor control, refocus tourist and visitor movements through smart phone applications and augmented reality – Market Square historical tour.
- Responsive landscape features where visitors can charge smart phones or have access to public Wi-Fi.

6.2 The Market Today

The market today operates seven days a week and is regarded as a significant asset to the city of Cambridge. Market activity is strong throughout the year, however the lowest activity is typically observed between October- November and January- March.

Consisting of 99 stalls, these are arranged in a linear format with pedestrian access north to south. Facilities for the market are provided by Cambridge City Council as the registered freeholder, registry title number CB287332. These facilities include drainage, power and commercial refuse collection. Two below-ground lavatories are provided for private use; these areas are also used for storage and as a means of access to hot water.

Stall Distribution and Pricing

The distribution of market stalls varies in cost depending on location and day of trading. Current prices range from £10 to £39.62 per day. Casual trading is charged at an additional £5 premium. The offering of hot food within the market has been an area of growth in recent years and hot food traders are charged an additional £7.33 per day. General pricing information and stall locations can be found within the City Council website; generally premium priced rates are for edge stalls where higher anticipated footfall is regarded as a significant benefit for trading. Current trading is designated specifically to the central area of Market Square. Market Hill, which encompasses the market, is a prohibited street for trading and any obstruction to the public highway is considered an offence under Section 137 of the Highways Act 1980.

Stall Construction

The City Council provides and maintains stall canopies, trestles and boards. Market stalls are 3400mm x 2400mm in plan size and constructed of metal scaffold rods soldered together with fire retardant tarpaulin. The highest point of the stall, ie the apex, is approximately 2500mm high. These stalls are fixed pieces of infrastructure, limiting the flexibility of the market and the widths of aisles.

Drainage, Power and Commercial Refuse Collection Power/LPG

All market stalls are equipped with two power connections and a 16amp fuse. A 240v electricity supply is currently supplied on Market Square. The use of LPG/pressurised cylinder is permitted by the City Council through written consent, LPG is provided by stall holders.

Drainage

The market trading area is serviced by 10 gullies which are of a standard highways design and loading classification. Surface cleaning of the cobbles is undertaken weekly with a pressure washer. Additional surface water through cleaning and maintenance discharges into the central 10 gullies and the surrounding gullies located within the public highway. All grey

water is discharged into the existing drainage system and filtered through grease traps (although anecdotal information received suggests no grease traps are currently working). Existing crossfalls within the surface run from south to north, although existing gradients are shallow at 1:75 to 1:170. Although an evident crossfall is present, the irregular nature of the existing surface means localised ponding of surface water can be seen. Anecdotal information has indicated that the current drainage system overflows and is prone to flooding when a high volume of rainfall is encountered.

Refuse Collection

Commercial refuse is contained within the site compactors located along the western edge of the market, opposite the Grade I listed Great Saint Mary's Church. This commercial waste is collected only when the compactor is filled. Public refuse collection is controlled by the City Council and occurs continuously throughout the day, with refuse vehicles accessing the market 2 to 3 times per day. It is the responsibility of market traders to clear/clean their individual pitches at the end of each day of trading. The Streets and Open Spaces Department manages the clearance of street arisings and public bins, which includes shared waste for domestic/commercial collections.

Refuse collection relevant parties:

City Council Streets Department

- Litter bins, daily (hourly) litter picking and market cleansing 7 days a week, 24 hrs a day.

Greater Cambridge Shared Waste Service

- Commercial and domestic refuse collections 7 days a week.

Markets Team

- Daily management of traders/income generation

Communities Team

- Night-life economy and alternate uses of the Square

Retail & Hospitality Businesses

- Independent deliveries waste collections

College Residences

- Often customers of City Council waste collection team, but can use other contractors.

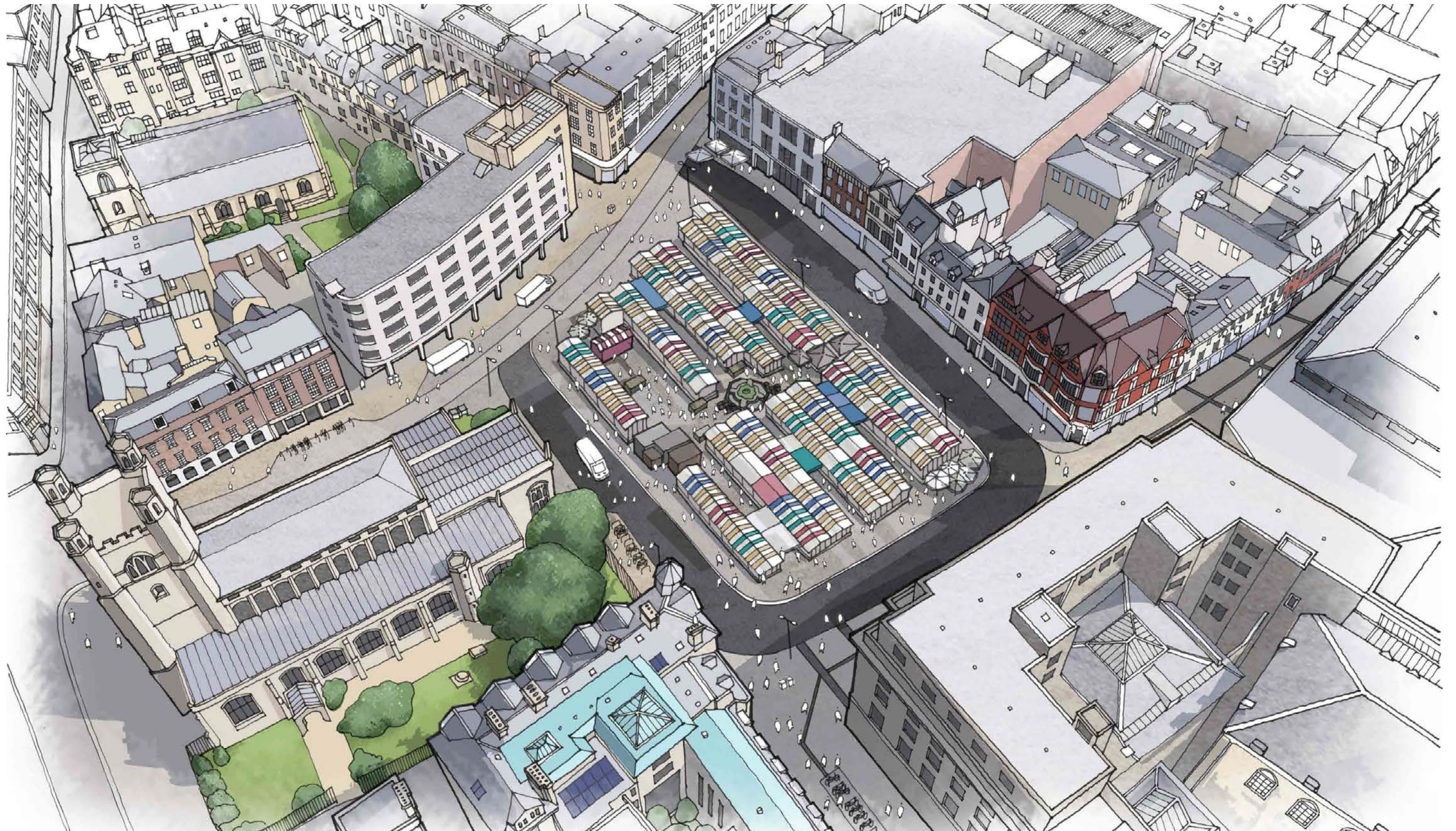
Cambridge BID

- Promotion of the city centre for business members/public/tourists.

Highways Department

- Access by waste contractors is dependent on the Highway system/one-way/timed barriers.

6.0 Market Assessment



6.0 Market Assessment

6.3 Current Regulations

Current regulations are outlined within the 'City Council's Charter Market Regulations 2016'. Key headline regulations are outlined below, please refer to the aforementioned documentation for further information.

Market Opening Times

- General Market - Mondays to Saturdays between 10am-4pm
- Arts and Crafts Market - Sundays between 10am-4pm
- Local Produce Market - Sundays from 8am- 4pm

Operational Restrictions

- Traders must not come onto the market before 6.30am.
- All vehicles must be removed from the market by 9.30am and traders must not bring their vehicles back to the market until after 4pm.
- All traders must vacate the market no later than 6pm.
- Traders must ensure that they observe a maximum vehicle speed of 5 miles per hour.

Licence

- All traders must sign a Licence Agreement. There are no clauses stated within the Charter Market Regulations which allow the City Council to revoke existing licences, unless a trader has breached the terms of their agreement with the Council.
- Traders wishing to leave the market or give up one or more of their stalls must give four weeks' written notice of their intention to the Markets Management Team.
- In addition the Cambridge City Council Street Trading Policy 2012 sets out which city centre streets can lawfully hold on-street trading. This is in accordance with the current byelaws.
- The streets surrounding Market Square where trading is currently consented include Guildhall Street, Market Street, Peas Hill, St Mary's Passage and Sidney Street.
- **Prohibited** streets include All Saints Passage, Bene't Street, Corn Exchange Street, Kings Parade, Market Hill, Petty Cury, Rose Crescent, St Mary's Street and Senate House Hill.
- There are several property lease agreements for mobile catering units on the square.

6.4 Key Constraints

The key constraints have been collated through a combination of desktop studies and anecdotal information attained from technical stakeholder interviews.

Market Trading Policy and Land Ownership

Currently Market Hill is designed as a road, which is both out of keeping with its historic setting but also consequently this layout suggests vehicles take priority. This creates an unwelcoming environment for pedestrians and cyclists to access, move around and enjoy the area. Under the Cambridge City Council Street Trading policy, market stalls are currently prohibited from setting up on Market Hill without a prior legal agreement. This limits the adaptability of the space for the market to thrive, special events to be organised and also for a more flexible and sustainable access and movement approach to be implemented.

Market Licensing

As there are no clauses stated within the Charter Market Regulations which allow the City Council to revoke existing licences, therefore altering the location or amending the existing arrangement of the market would require changes to the current regulations and/or individual agreements in place. There is some uncertainty over what rights traders may have acquired, given existing terms and length of uninterrupted tenure.

Cambridge City Council may change the regulations at any time, however they are required to give 4 weeks written notice to Traders. The City Council must also consult with traders prior to any changes to the regulations being made.

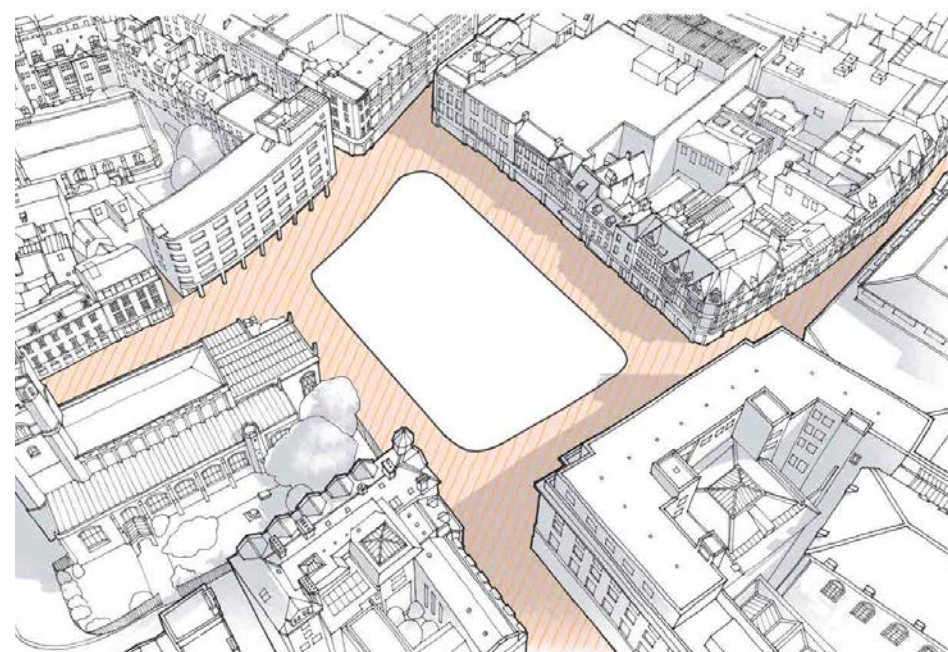
Market Set-Up

Currently the majority of stall holders set up outside of the 10am- 4pm access restrictions. The majority of market traders use small vans and cars to set up, with larger vehicles only accessing the area to deliver meat and fruit. Once set up, all traders' vehicles have to be removed from the CPZ (controlled parking zone). Traders park in adjoining residential streets. However, due to the existing market layout, it can hinder vehicular access, impacting on the efficiency of market set-up (and set-down) and has also raised concerns regarding road safety.

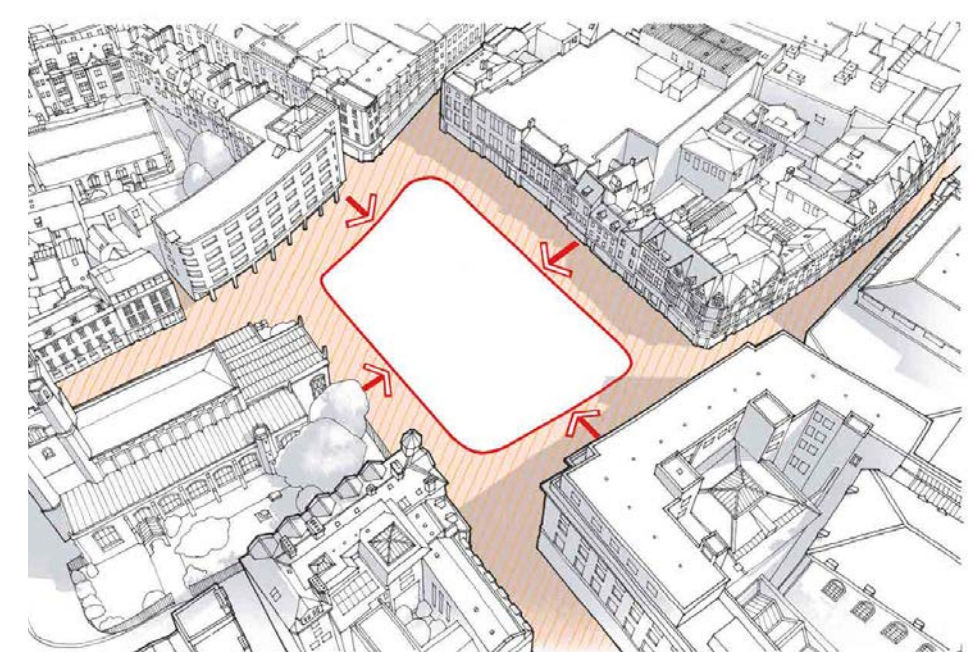
Configuration of the Market

The current configuration of the market restricts views and permeability through the market space. The linear orientation allows north/south access, however east/west permeability is restricted. Views to the Grade I listed Great Saint Mary's and the Grade II listed fountain are restricted by this stall configuration. Public space surrounding these areas is compromised by the encompassing carriageway and the density of cycle parking along pavements and bins surrounding the central fountain. Because of this the market trading area is restricted, resulting in narrow and cluttered through routes for potential shoppers.

As a public space the market square records high footfall on the eastern side of the square. This footfall is largely through movement by pedestrians and cyclists. As a consequence the market has become front-facing towards the eastern side of the square and back-facing to Great Saint Mary's, which is considerably quieter. Improved market permeability would help rebalance this disproportionate configuration, enhancing both sides of the square.



Constraints - Prohibited Streets



Constraints - Pressure on existing market space and surrounding public realm

6.0 Market Assessment

Existing Facilities

There is a consensus amongst technical stakeholders that aesthetically the market stalls are not appealing. Due to lack of storage some stall holders lock their stock on site, making it more challenging to clean and trapping grease and dirt. In addition, stall boards and infrastructure which remains overnight reduces visual permeability through the space, and when coupled with the current poor lighting provision to the central area is seen as a contributing factor towards the anti-social behaviour that occurs. In addition the current configuration of Market Square restricts public space and the opportunity to create spaces where people can dwell and spend time. A lack of seating means people tend to arrive and leave the market within a short space of time. A key goal for the market should be its ability to keep potential shoppers engaged, fostering a 'stop and stay' mentality within those that visit. Features such as the refuse compactor, which is seen as a visually obtrusive element within the square, only reinforces the uncomfortable nature of the public realm.

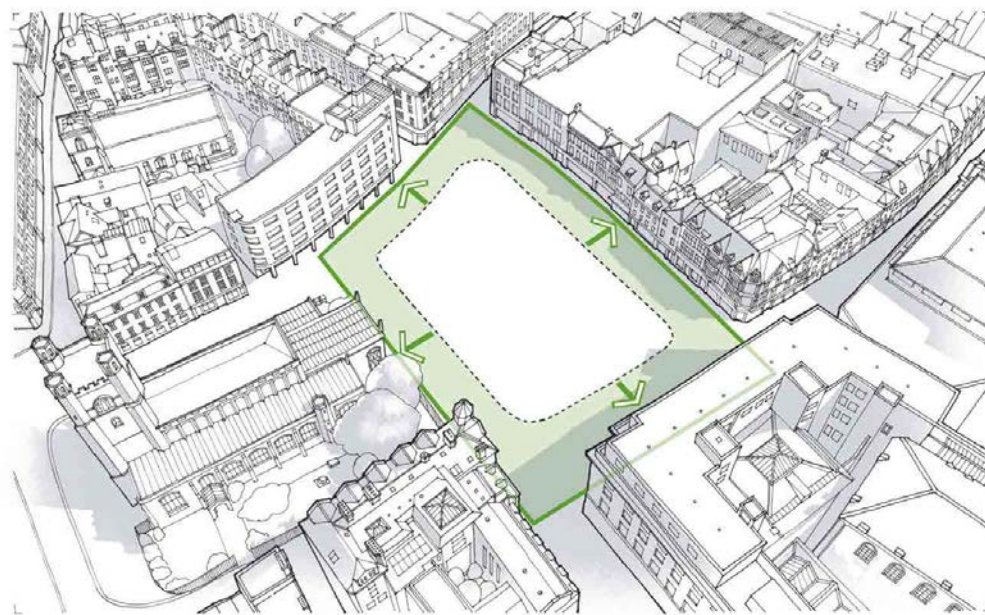
6.5 Opportunities and Recommendations

A robust engagement strategy is required for any potential scheme for the square and market stall holders (or their representatives) should be included within this engagement process. It is also recommended that a Market Needs Specialist is engaged to help facilitate this process. This should include engagement with both the Traders Association and individual stall holders. Through this engagement process, opportunities and potential design proposals can be tested and discussed from the trader's perspective.

Key opportunities for the market, which have emerged from the technical engagement and supporting desktop studies, are the following key items;

- Review the use and function of Market Hill as a public highway to support an approach to access which is more flexible. This could create additional space for trading and improve the adaptability of the space for the market to thrive.
- The use of Market Hill, Peas Hill and Guildhall Street for permanent additional market stall capacity.
- Creating an enhanced market stall arrangement that improves permeability and exposure of stall frontages, whilst enhancing the visual connection between spaces. A financial appraisal will be required in order to underpin revised market stall arrangements. As such a Market Needs Specialist will need to be appointed to fully engage and evaluate any such redesign.
- Better utilisation of the space at night and a reduction in anti-social behaviour. Consider broadening market trading hours with seasonal night-time events, better facilities such as improved lighting to the central market space, and a review of market stall designs to offer better visual permeability. Consideration should be given to determine the pros and cons of a fixed or flexible stall design which enables other activities to take place outside of market operational hours.
- Create spaces for people to dwell and spend time within. A greater emphasis on seating and spaces which encourages a dwell time. This includes improving the aesthetic setting of the public space, improving visual connectivity to listed features and removing street clutter which is visually obtrusive.
- Engage potential sites for temporary market stall relocation whilst works are taking place, including Sidney Street, Peas Hill and the surrounding parks.

- There is the potential to create space for civic and community events including, but not limited to, cinema screenings, performances, temporary public art and exhibition spaces, al fresco dining or additional space for informal seating.
- Test proposals through temporary road closures and pop-up events.
- SMART City, information exchange. Future-proof the square for technological change, consider the necessary infrastructure for the growth of smart technologies, short-term provisions could include on site Wi-Fi, live data and smart phone applications for events. Longer-term applications could include consolidated and automated vehicle control.
- Enhance the look and feel of the materials and surfacing within the square, whilst safeguarding the market's unique character, including improved accessibility and clear, unobstructed compliant routes through the market.
- Need to survey businesses to identify current delivery needs and whether or not these can be changed.
- Undertake a review the existing parking provision set aside for traders.
- Support traders adopting low emission/electric or pedal powered vehicles in response to the City's ambition to improve air quality within the city centre, and likelihood of a Clean Air Zone with penalties for polluting vehicles being enforced.
- Obtain legal view on any acquired rights traders may have obtained and assess their impact on the feasibility of the project.



Opportunity - Open the square to maximise the potential of the market and the public realm



Schematic arrangements of market stalls (indicative)

6.0 Market Assessment

6.6 Market Occupancy

The below diagrams outline the current occupancy of the market. It is noticeable that there is a high proportion of unoccupied stalls during the working week, circa 15-20%. Hot and cold food and retail stalls are the most prevalent. This suggests that consideration could be given to a more flexible stall arrangement in order to utilise the space of unoccupied stall areas. However any rearrangement of market stalls would require thorough planning and coordination with the requirements of stall holders and their access to services, particularly hot food stalls.

As part of the next design stage a detailed consideration of the market stall numbers, status and configuration must be undertaken with a market needs specialist. This should be informed by organised trader engagement.

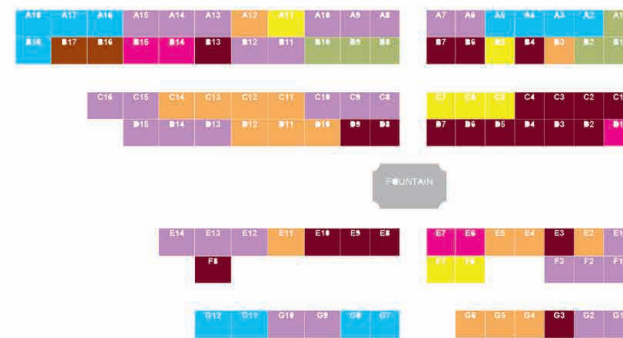
Cambridge Market Charge



Market plot charge:

- Premium Rate :
Monday to Friday £20.53
Saturday and Sunday £39.62
- Standard Rate:
Monday and Tuesday £10.00
Wednesday to Friday £17.07
Saturday and Sunday £32.55

Monday



Number of market stalls per type:

- 6 Fruit & Vegetable
- 12 Food
- 22 Hot Food
- 5 Souvenirs
- 2 Craft
- 29 Retail
- 16 Vacant
- 7 Services

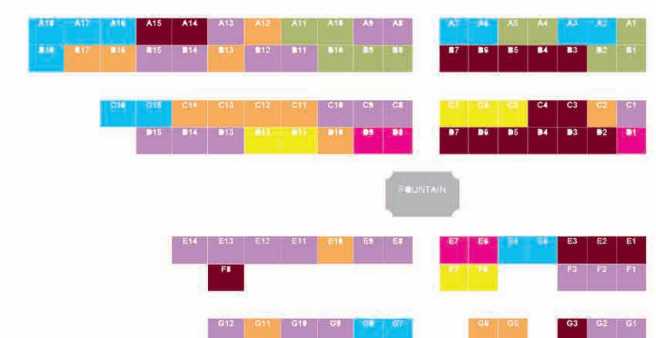
Tuesday



Number of market stalls per type:

- 10 Fruit & Vegetable
- 9 Food
- 17 Hot Food
- 2 Souvenirs
- 0 Craft
- 27 Retail
- 25 Vacant
- 7 Services

Wednesday



Number of market stalls per type:

- 10 Fruit & Vegetable
- 14 Food
- 20 Hot Food
- 6 Souvenirs
- 0 Craft
- 28 Retail
- 16 Vacant
- 7 Services

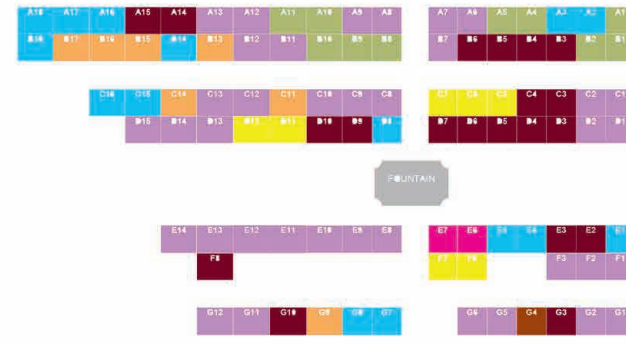
Thursday



Number of market stalls per type:



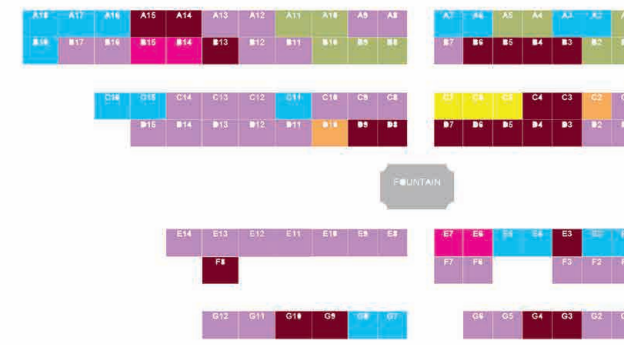
Friday



Number of market stalls per type:



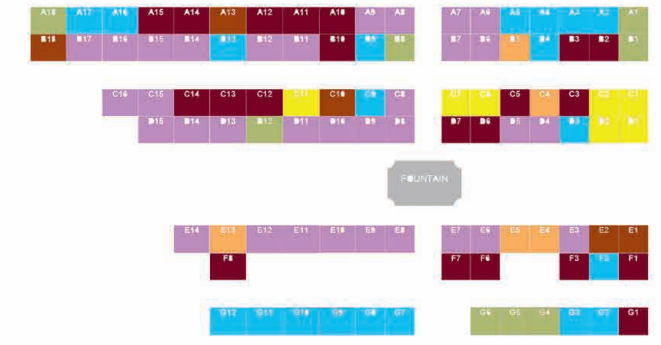
Saturday



Number of market stalls per type:



Sunday



Number of market stalls per type:



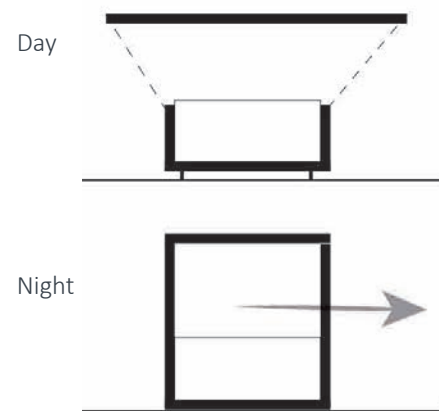
6.0 Market Assessment

6.7 Market Stall Structure – Options

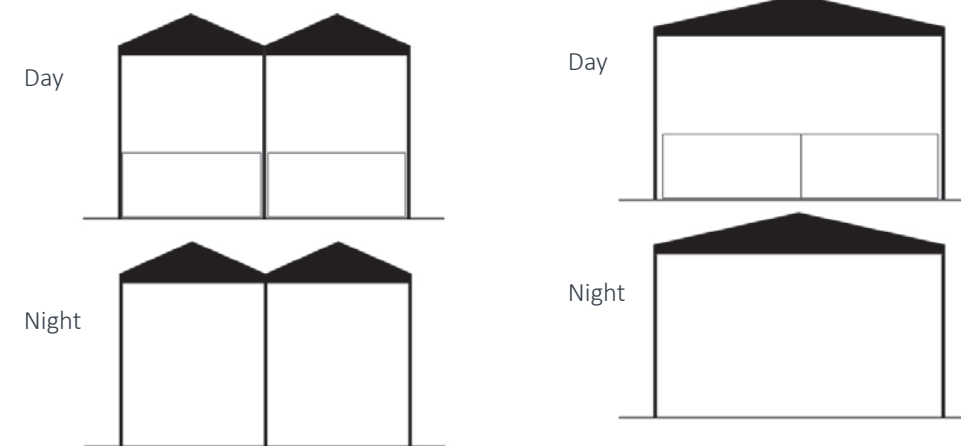
To respond to the needs and current constraints of the Market Square four example market stall designs are illustrated on the following pages. These designs are intended as guidance and would require further development by a specialist supplier during RIBA Stage 02. Market stall designs should also be informed through engagement with existing traders.

These illustrative designs have been based on common approaches adopted within European cities.

Fully mobile structure



Fixed/permanent structure



Fixed and permanent canopy

Advantages

- Robust structure
- Integrated power/lighting supplies
- Always ready for market traders
- Fixed stalls can become part of Market Square's character

Disadvantages

- Inflexible
- Restricts paving surface cleaning
- Can be a complex structure
- Limited maintenance of the place
- Restricts views beyond trading hours
- Restricts movement for pedestrians and cyclists
- Can facilitate antisocial behaviour through lack of visibility
- Unoccupied stalls can not be used for other uses (additional space)
- Restricts flexibility the arrangement of stalls

Fixed and permanent canopy - Large



Fully mobile structure

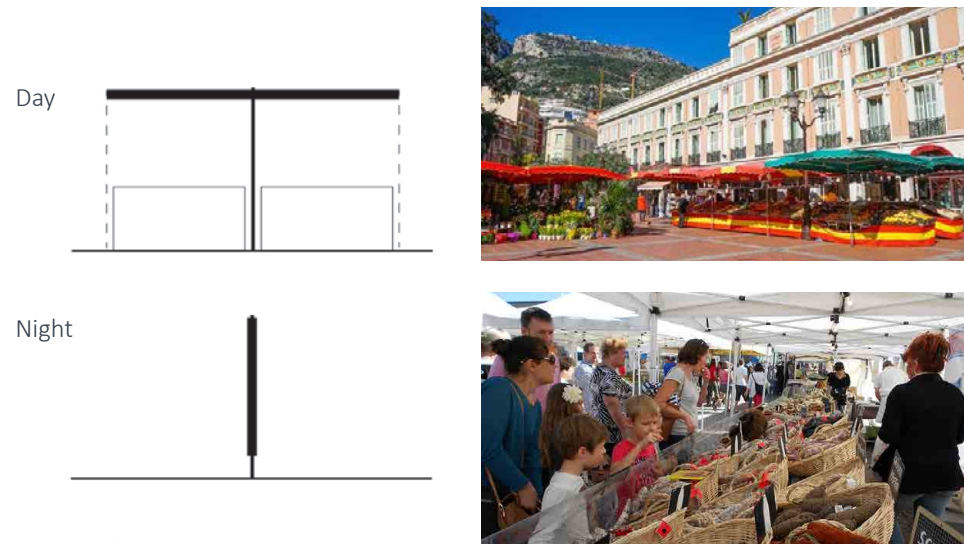
Advantages

- Mobile and allows for a more flexible use of space.
- Integrated power/lighting supplies.
- Easy to clean and maintain pavement surface and drainage beneath.
- Mobile stalls can become part of Markets character if designed appropriately.
- Views through the space can be enhanced outside of trading hours.

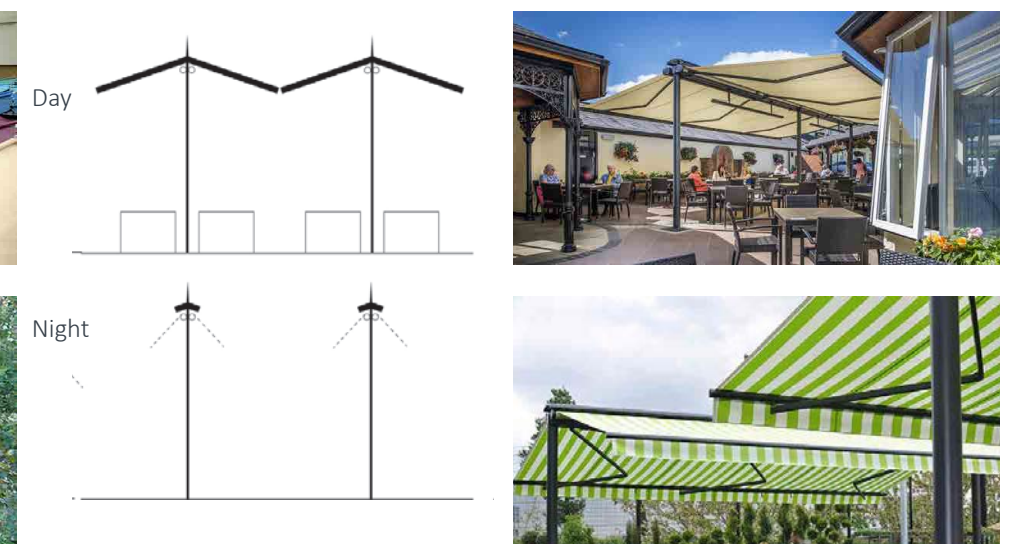
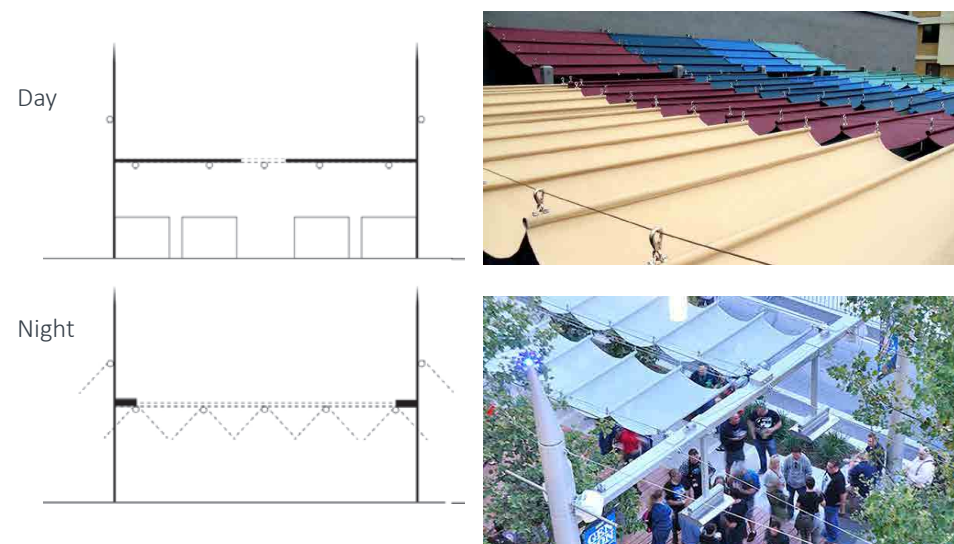
Disadvantages

- Can be a complex structure and may be expensive to fabricate and replace.
- Potentially restricts the flexibility of stall use and licensing.
- Requires organised setup and set-down if stalls are to be relocated from trading positions.

Dismantlable structures



Retractable structures



Umbrella

Advantages

- Flexible, modular umbrella
- Easy to erect in a very short time
- Umbrella can be either permanently or temporary fixed (day/night)
- Frees space at night
- Accessories can be added- power/lighting
- Canopies can be linked together creating larger coverage
- Easier pavement surface cleaning
- Allows movement, access and visibility outside of trading hours
- Can be used for market traders but also on terraces (cafés, restaurants etc).

Disadvantages

- Structure is more complicated than a fixed arrangement and would require maintenance overtime
- Market traders would need to setup daily and remove products from site.

Retractable canopy

Advantages

- Semi-flexible, fixed posts and suspended cables
- Easy to open and close in all weather conditions
- Easier pavement surface cleaning
- Frees space day and night in absence of structure
- Can support lighting elements when open or closed
- Allows views of the entire place and surrounding buildings when canopy is retracted
- Can be used for different events/uses
- Canopy can be partially open according to need

Disadvantages

- Can be a significant cost
- Structure is more complicated than a fixed arrangement and would require maintenance overtime
- Market traders would need to setup daily and remove products from site.

Retractable canopy

Advantages

- Semi-flexible, fixed post and horizontal structure
- Large lighting cover at all time
- Strong and robust
- Easier pavement surface cleaning
- Easy to open and close according to weather conditions
- Allows and frames views depending on the height of the canopy
- Easy access and movement for all
- Can be used for different events/uses
- Post or horizontal structure to support lighting elements

Disadvantages

- Can be a significant cost
- View of the supporting structure at all times
- Structure is more complicated than a fixed arrangement and would require maintenance overtime
- Market traders would need to setup daily and remove products from site.

6.0 Market Assessment

6.8 Assessment of Larger Canopy/Covered Space

In order to realise the opportunity for a canopy structure within the square there is the need for thorough engagement. This engagement would establish if the principle of a canopy structure could be supported by stakeholders. Subsequent design steps would then need to be taken to accommodate any requirements set through the engagement process, as an example undertaking a visual impact assessment that demonstrates that key views are maintained.

Once the engagement parameters have been set, a second key factor is construction viability and associated cost. The construction cost of a large canopy will depend greatly on the complexity, size and span of structure. Additional significant costs could be incurred if the canopy structure impacts existing utility runs or existing subterranean structures. To mitigate these risks, further surveys would be recommended/required as part of RIBA Stage 02, for example localised Ground Penetration Radar (GPR) surveys.

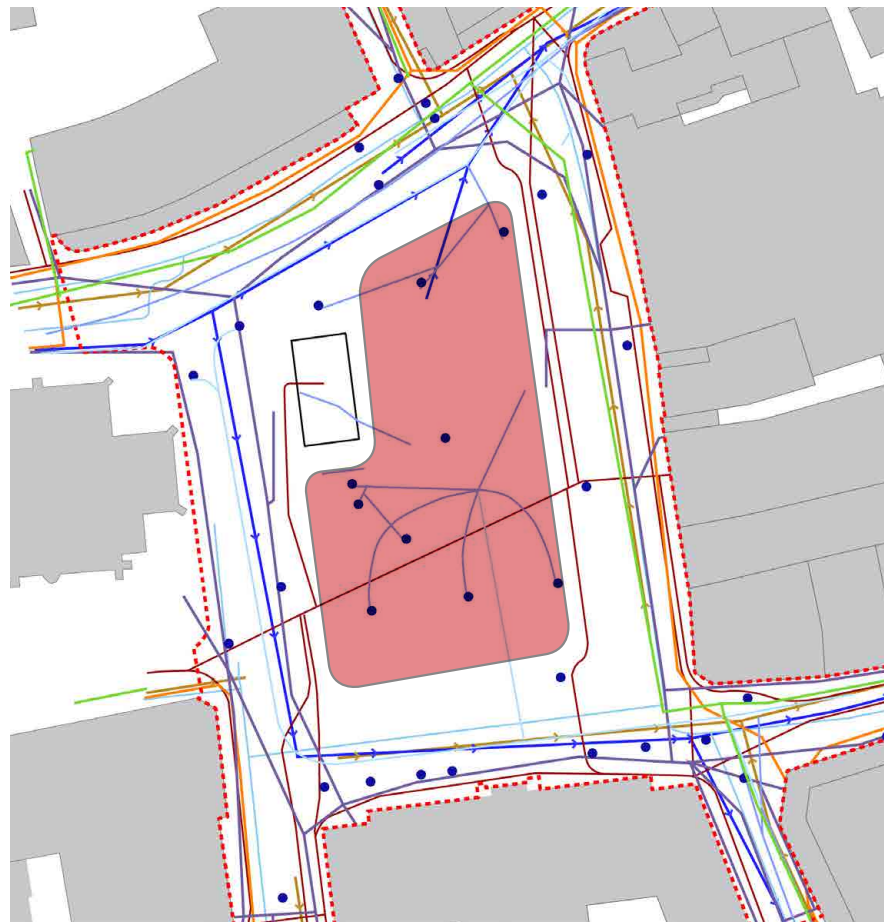
From the initial desktop study the following criteria would be advised if a canopy over the square is to be pursued within RIBA Stage 02;

- Avoid over-sailing public highway or emergency vehicle access routes.
- Avoid areas where there is a high volume of utilities or subterranean structures.
- Maintain key views to and from listed buildings.
- Early engagement with stakeholders and Historic England to assess acceptability.

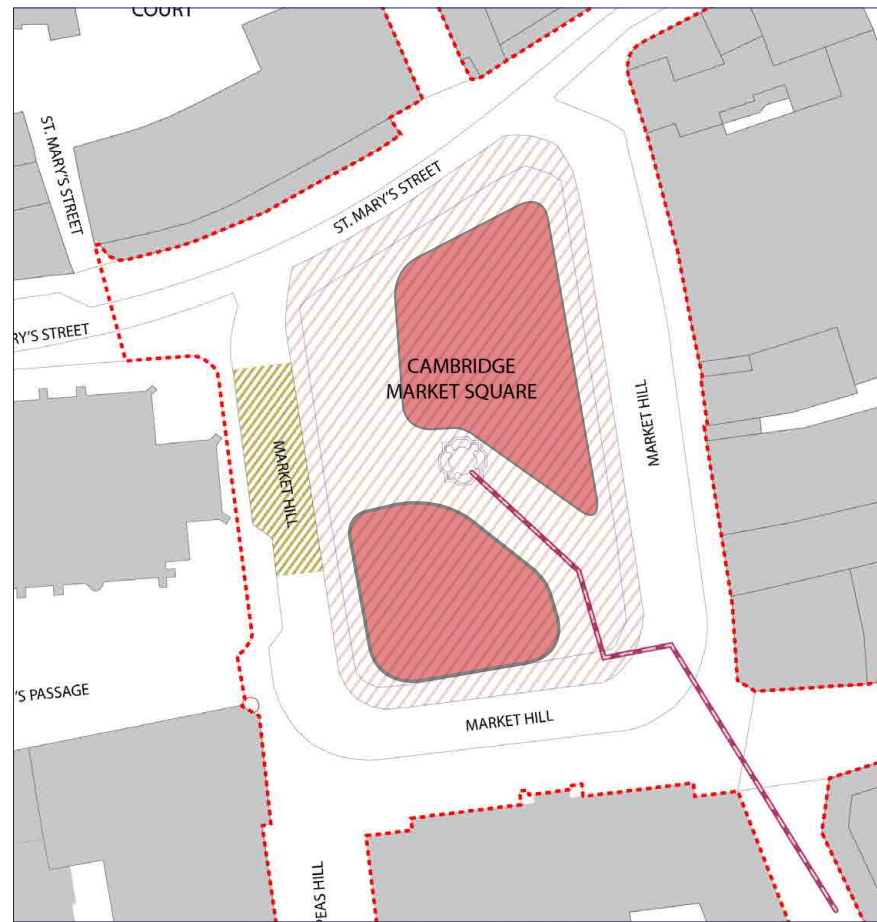
Recommendation

Regardless of the process undertaken it is likely that a large canopy above the market area would be an unachievable objective for the scheme. As context there is a precedent of stakeholder objection to previous proposals for the Market Square. Prior objections by Historic England have been raised in relation to a proposal for the relocation of the grade II listed fountain. Therefore, and as using this as a point of reference, the perceived impact of a large built element, such as a canopy, would be seen as significant and likely encounter considerable stakeholder concern;

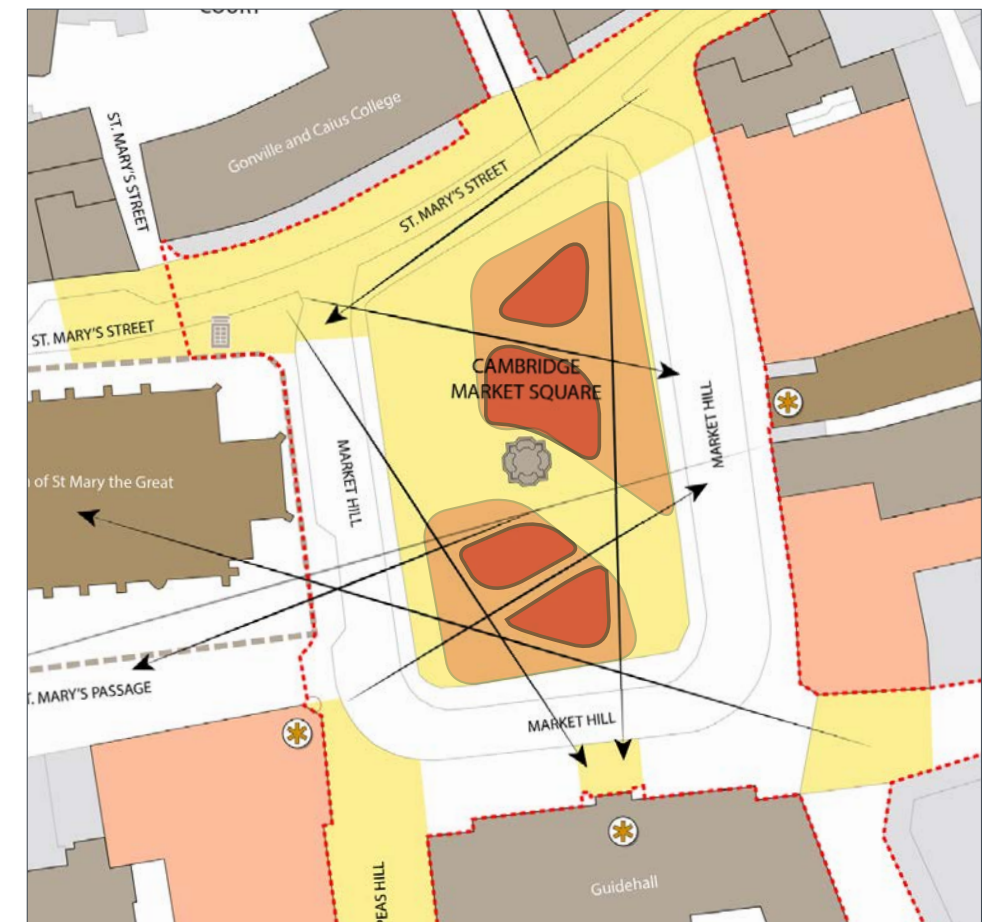
- A large canopy to the square would not only obscure key views to listed buildings but also fundamentally change the character of the space.
- This would disregard Policy 10 of the Local Plan which seeks to 'preserve heritage assets' within the city centre.
- A smaller canopy would unlikely justify the cost and complexity incurred to the project.



Avoid oversailing public highway or emergency vehicle access routes.



Avoid areas where there is a high volume of utilities or subterranean structures.



Maintain key views to and from listed buildings.

 Canopy location- Opportunity areas

6.0 Market Assessment

6.8 Assessment of Larger Canopy/Covered Space

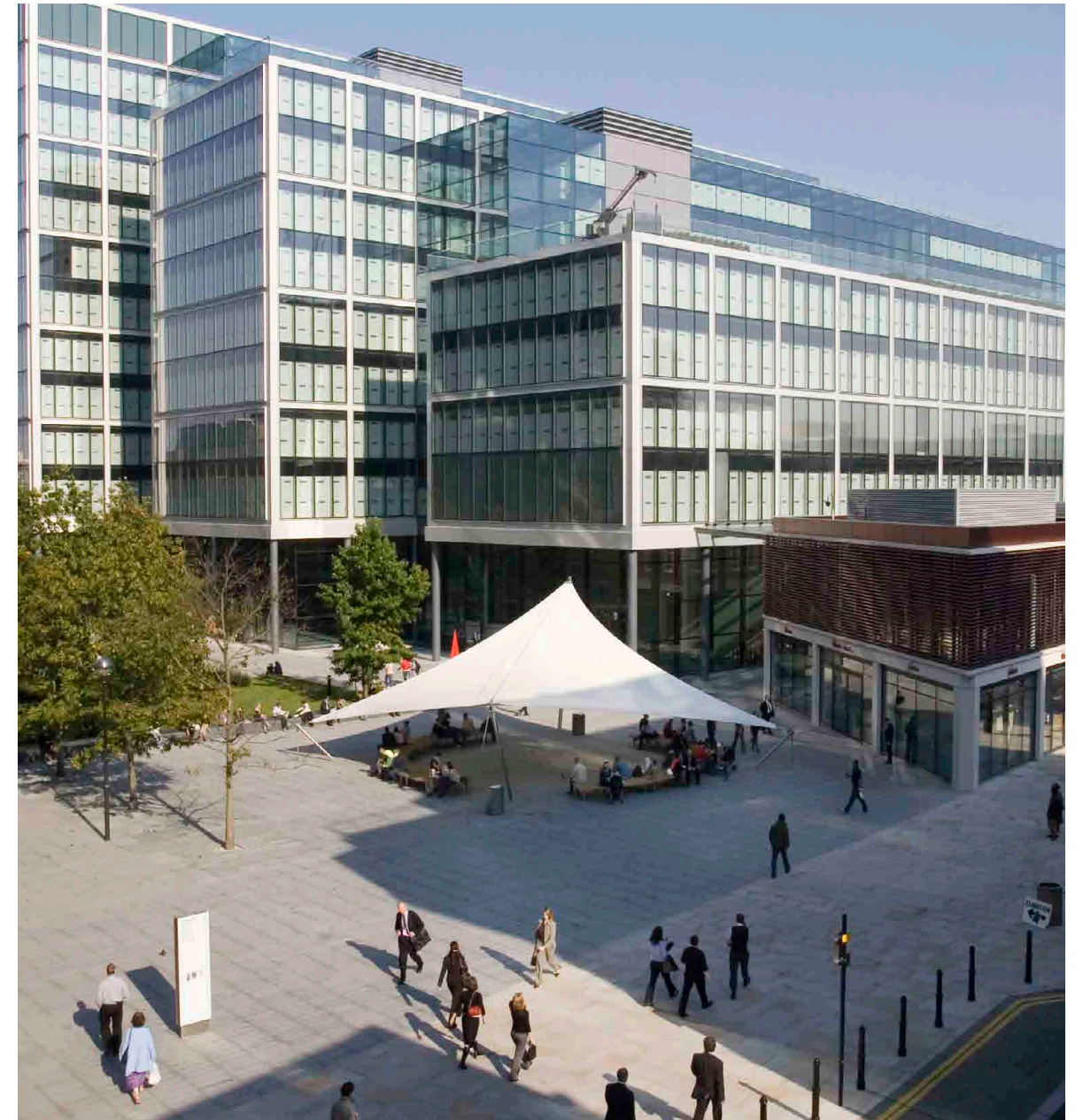
The construction cost of a large canopy will depend greatly on the complexity, size and span of structure. The greater the size of canopy, the higher its functionality and its ability to accommodate a breadth of uses. A larger canopy would however hold a greater level of engagement, design and construction related risk.



Large scale canopy- high construction cost, high level of project risk however functionality is high.



Smaller scale canopy- lower construction cost, lower level of project risk however functionality is low



6.0 Market Assessment

6.9 Below Ground Waste Management - Case Study

This section of the feasibility study outlines a high-level assessment for below ground waste storage within the Market Square. Currently, within other areas of the city, the City Council uses a range of below ground refuse containment systems. Each system is selected on a case by case basis according to the specific operational requirements of the location. As such the refuse solution for the Market Square can only be defined once a refuse strategy has been determined against an agreed design.

Current below ground refuse systems adopted by the council are a mixture of hook-lift and hydraulic systems. Hydraulic systems are used for collecting electrics and textiles, whilst hook-lift systems are used for recyclables and general waste. Systems currently being used within Cambridge hold a capacity of 5000 Litres for a hook-lift system and 11,00 Litres for a hydraulic system. Hook-lift systems are emptied weekly for each waste stream, however this can vary depending on capacity and use. Fill monitoring systems can be incorporated to signal when bins are nearing capacity.

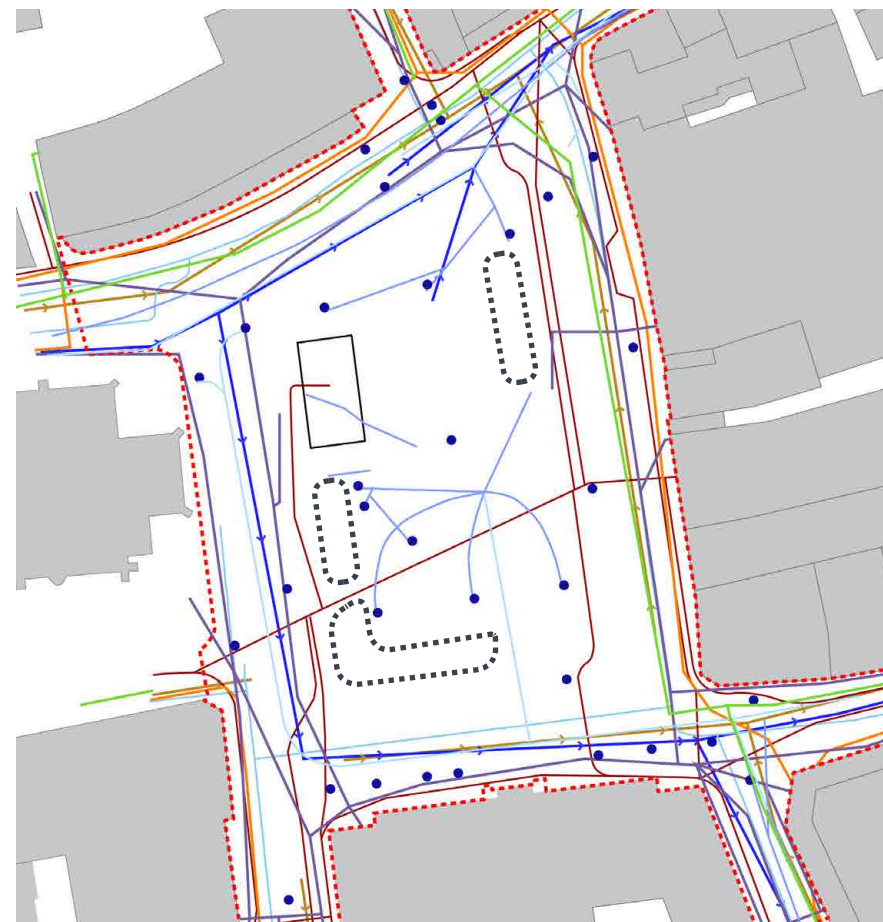
High-level costs

Hook-lift systems are approximately £6,500.00 per item, Hydraulic systems £8,000.00-£10,000.00, these costs do not include construction/installation. Construction costs, and the risk associated with significant excavation, can only be determined following detailed Ground Penetration Radar (GPR) surveys and an archaeological assessment of the proposed excavation site. As such the cost and complexity of introducing a below ground system will likely incur further significant expenses to those outlined. Routine servicing/maintenance is approximately £100 per bin per year.

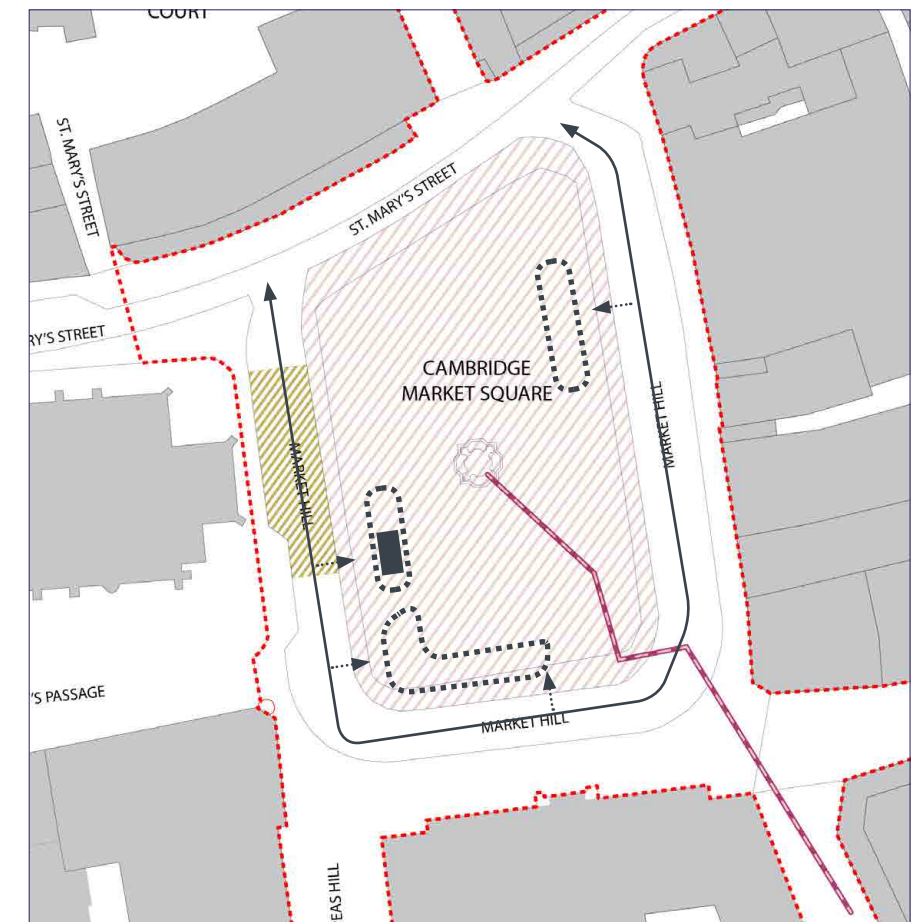
The adjacent diagrams outline potential, lower risk, areas within the square for significant excavation. These areas sit beyond the known utilities and subterranean structures identified through the desktop study (utility locations to be defined through GPR survey).

Below ground refuse containment is an achievable objective for the scheme, it should encounter little resistance from stakeholders as there is an effective precedent of its application within Cambridge. Regardless from the initial desktop study the following criteria would be advised;

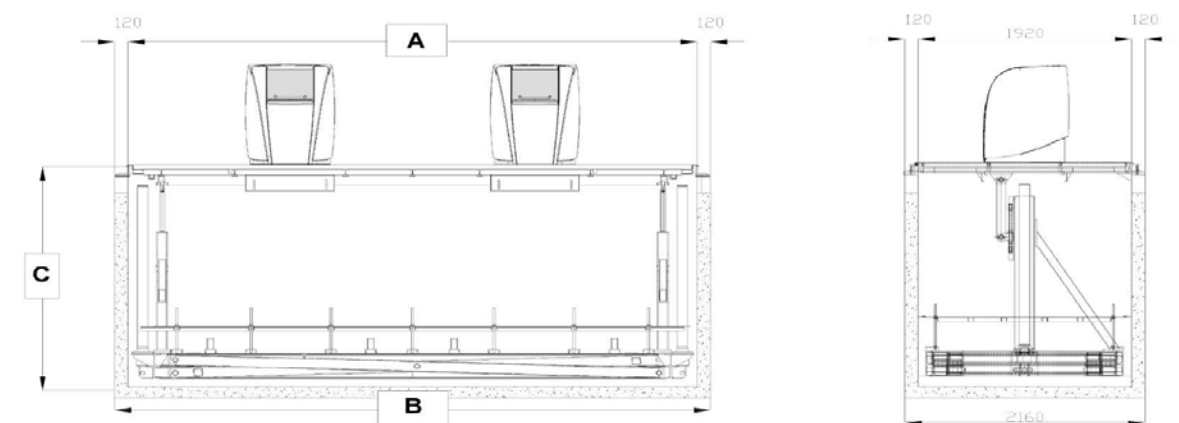
- Avoid public highway or emergency vehicle access routes.
- Avoid areas where there is a high volume of utilities or subterranean structures.
- Early engagement with stakeholders to assess acceptability.



Avoid areas where there is a high volume of utilities



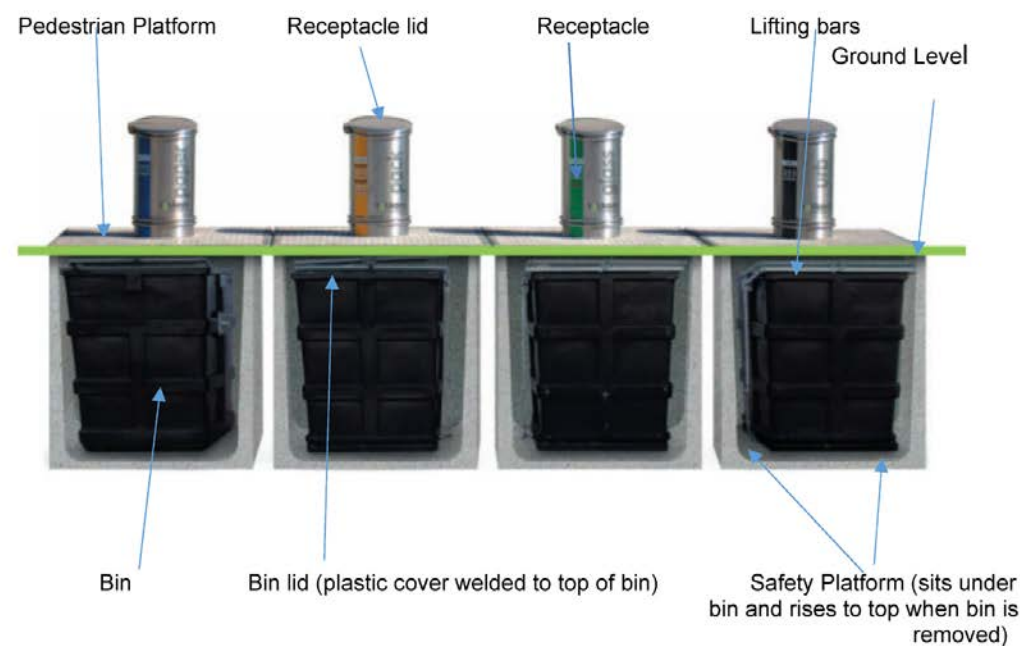
Scale- Refuse containment size (below ground) 5.355m x 2.345m
Avoid areas where there is a high volume of subterranean structures.



Scale- Refuse containment size (below ground) 5.355m x 2.345m

6.0 Market Assessment

6.9 Below Ground Waste Management - Case Study North West Cambridge Development



Extract supplied by Cambridge City Council;

Description of the Underground Bin system

The NW Cambridge Development will be equipped with high quality underground bins supplied by ADI UK, and manufactured by Sotkon Portugal.

The 5m³ plastic waste containers sit in deep concrete bunkers under the pavements. Residents place waste into a receptacle that appears similar to a street level waste bin. The waste falls down into the underground containers. The underground containers are covered with a pedestrian platform, which hinges open with the input receptacle to facilitate emptying. When containers are lifted out of the bunkers by the collection vehicle crane, a safety platform automatically rises under the container to close the underground void. When the container is held above the collection vehicle, the bottom of the container is opened to release the waste into the vehicle.

The Receptacles

Circular deposit bin (or input receptacle) made of AISI 316 stainless steel. Watertight stainless steel cover with a handle for depositing waste. All metal parts and threaded parts are also made of stainless steel. Each bin is identified using signs displaying the type of waste to be deposited in each one.

Closure

The cover is pressed into the body of the bin.

Upper cover

The upper cover possesses a tube around the rim for reinforcement, and insulation is provided by a rubber seal to prevent noise and any unpleasant odours. The opening, located at a height of around 90 cm, is slanted and opens to the side for ergonomic reasons.

Dimensions

Front height: 900 mm
Rear height: 1.000 mm
Inner Ø of opening: 510 mm

Manufacture

The bin is made using a welded structure. The welding seams of the rim and cover are debarred. The rim of the cover and hinges are polished.

The Pedestrian Platform

The street level pedestrian platform hinges on one side to allow for opening during bin emptying.

It consists of a galvanised steel tray, inset with granite paving to come flush with surrounding paving.



6.0 Market Assessment

6.10 Below Ground Cycle Storage, a Case Study For Cambridge Market Square

Example product- Eco Cycle Underground Bicycle Parking System

- Eco Cycle system is typically 11.6m deep but layers can be added or removed.
- Where installed below ground or in a building/structure the Eco cycle allows for a small foot print on the surface of 1.55m x 3.5m (with a 2m barrier for cycle docking) a considerably reducing on street clutter typically associated with cycle parking.
- The average retrieval time for a 204 bike, 11.6 metre deep, system is 13 seconds. Retrieval times increase or decrease with depth.
- Currently Eco Cycle uses a key card (or tag) system that allows pre-registered users to store and retrieve their bikes.
- There are a number of sensors to secure the safe operation of the system by users and ensure that other cannot gain unlawful access.
- The system is remotely monitored for security and to ensure prompt maintenance and repairs when required.

Installation

- Where the installation is a standalone structure and not integral to a building then a sheet piled structure is required, this to include the ground level 'lid' which is to withstand traffic.
- Sheet piles are used with this no vibration piling system which means that working areas can be kept very tight to the required excavation of 8.5m diameter (system framework 7.75m diameter).
- The system requires electricity and a phone line but no other utilities.
- Electric usage is low (...watts) and ECS advised solar panels could be incorporated.

Maintenance and Repairs

- The systems design life is understood to be 100 years though critical service parts within it will require maintenance and replacement.

Cost of Installation- information as of 2015

- Supply of the system, with standard above ground enclosure, only would be in the region of £365K and require a pre-existing water tight chamber c. 11.75m deep x 7.75m OD/Sq. This could be fitted above or below the ground in a new or existing building/structure.
- The indicative cost for the complete manufacture and installation of an above ground system would be around £650K.
- The indicative cost for the complete manufacture and installation of a below ground system £850K. This does not include utility diversions or bespoke cladding etc.

- Additional costs that would need to be factored in would include; design and bespoke cladding of above ground unit, utilities surveys and diversions, excavation and works by piling contractor, structural and M&E input.

Cost of Operation

- An operator should allow in the region of £5K per annum for running costs (inc electric). All operations to load and unload bicycles are controlled by computer reducing its running cost.
- Critical service parts for likely repairs (allow £5K per annum).
- Remote monitoring of the system (internally and externally) via CCTV cameras would cost around £15K per annum.

Conclusion

In summary the system offers multiple advantages from an Urbanism, planning and transport perspective and could provide a favourable way of accommodating cycle parking within the Market Square. There are a number of potential issues to overcome which need to be carefully considered. This includes a relatively high initial cost outlay, a likely requirement for multiple utilities diversions and possible issues with drop off and retrieval times during popular periods.

The ongoing operation of the system needs to be carefully considered in liaison with other potential stakeholders. Users need to pre register and sign up to use the system which needs further planning however the potential advantages are enormous. Ecocycle offers a potential source of revenue for investors with the opportunity to monetise the system by charging for use of the cycle storage. The growing popularity of cycling, increased population and pressures on space within the city mean that a system that can offer cycle parking for 204 bikes could be hugely advantageous.

The system engineers expect it to have an operational life of 100yrs +. The remote system maintenance will also have an advantage of quickly identifying required repairs or issues and Eco Cycle System have already put in place measures to deal with ongoing maintenance by partnering with a well established lift repair company who can respond to repairs in a timely manner.

Our recommendation is that further discussions with the City Council are pursued to explore the potential for funding of the installation. There is an opportunity to considerably reducing on street clutter typically associated with cycle parking and this could be an innovative and cutting edge

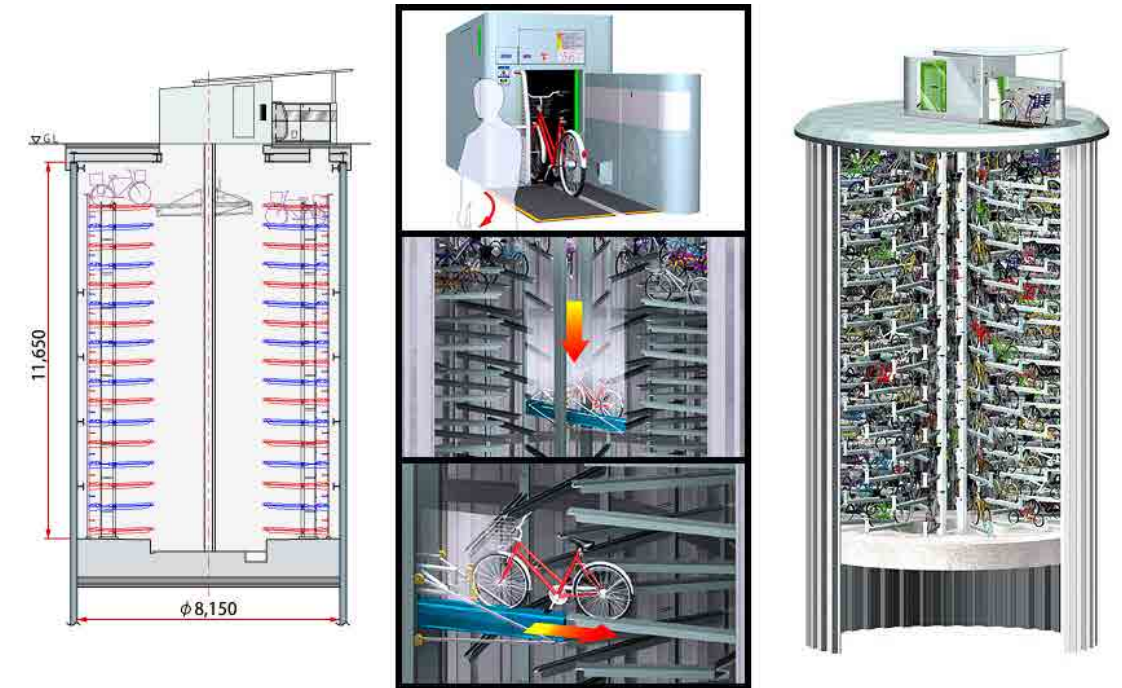
opportunity to put in place the first system in the UK. However it should be recognised that significant risks are associated with the adoption of such a system in the context of the square. With anticipated construction costs to be expected in excess of 1 million pounds, the Eco Cycle system would represent a significant proportion of the overall construction budget. Whilst some of these costs could be recouped through a potential pricing structure, attaining a return on the initial construction cost would be unlikely to be achieved when considering annual running costs. In addition the City Council would need to enforce above ground cycle parking to ensure people use the system, which would likely be negatively received and counter productive.

Below ground cycle storage will likely incur significant construction and maintenance costs which would likely outweigh the schemes benefits. Regardless from the initial desktop study the following criteria would be advised;

- Avoid public highway or emergency vehicle access routes.
- Avoid areas where there is a high volume of utilities or subterranean structures.
- Early engagement with stakeholders to assess acceptability.

6.0 Market Assessment

6.10 Below Ground Cycle Storage, a Case Study For Cambridge Market Square



◆ Loading Operations

1 IC tag that fixed on bicycle is read by the sensor, and then the Front Wheel Shutter opens automatically. Then, the front wheel should be placed into the open space.



2 After the front wheel is fixed by the Clamp, step away from the mat and then press "the Loading Button".



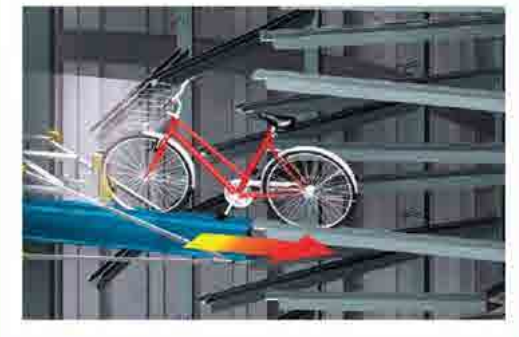
3 The Entrance Door opens automatically and then the bicycle is conveyed into the Eco-cycle. The door closes automatically. It is the end of loading operation.



4 Transporting Tray brings the bicycle down with revolving action to a vacant pallet.



5 The Transporting Tray slides to place the bicycle at the vacant pallet. It is the end of loading bicycle.



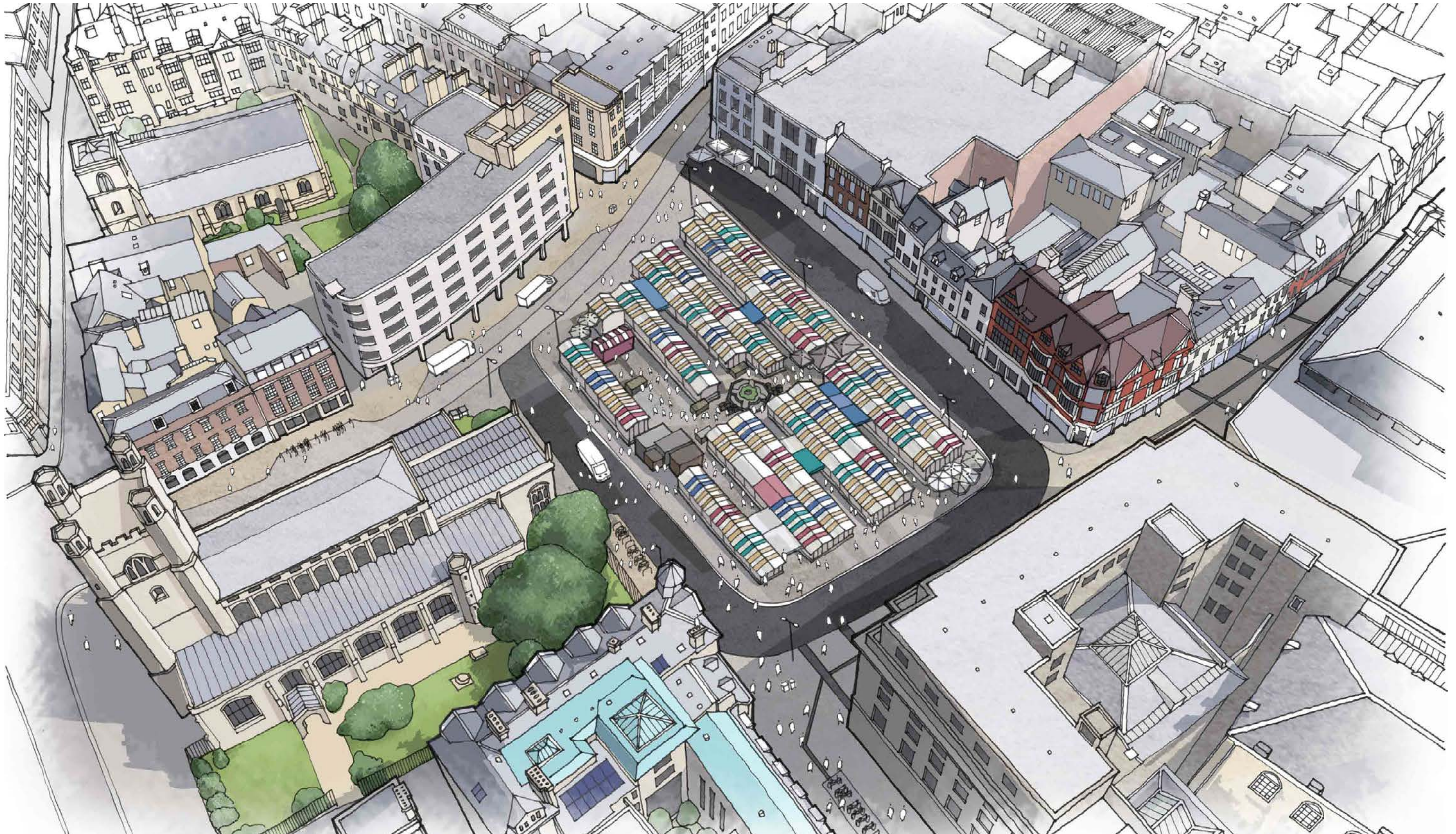
7.0 Opportunities & Levels of Intervention

- 7.1 Introduction
 - 7.2 Ia : Repave/Re-lay & Declutter
 - 7.3 Ib : Repave/Re-lay, Declutter & Relocate and Merge Functions
 - 7.4 II : Reorganise the Square
 - 7.5 III : Re-create the Square - Landscape Feature
 - 7.6 IV : Re-create the Square - Large Infrastructure
-

7.0 Opportunities and Levels of Intervention

7.1 Introduction

The Existing Situation



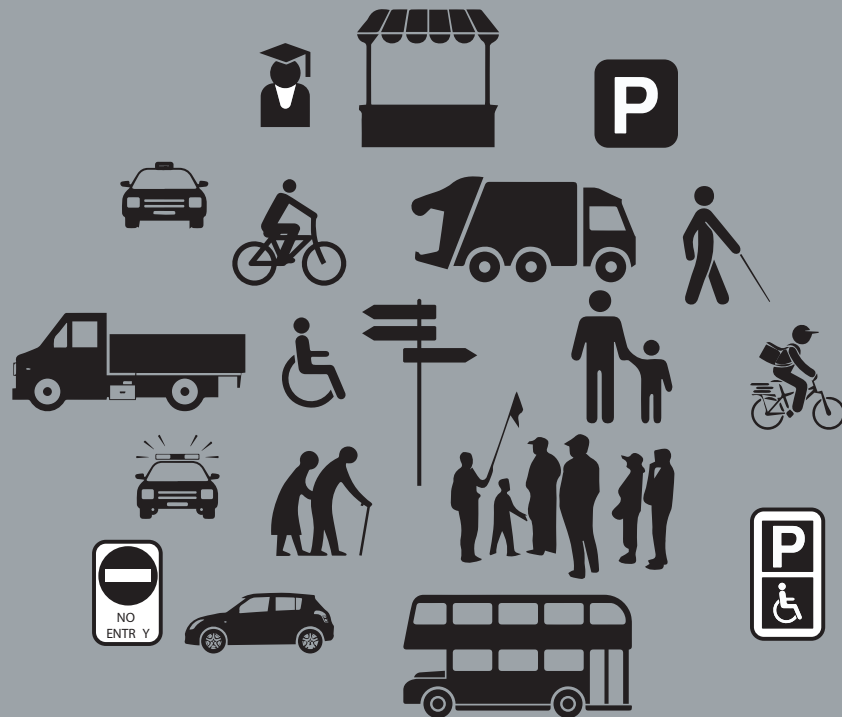
Illustrative bird's eye view of Cambridge Market Square in its existing condition

7.0 Opportunities and Levels of Intervention

7.1 Introduction

Movement Needs

The Existing Situation



Some of the movement needs that require consideration:

- Emergency services
- Residents
- Local visitors
- Tourists
- Local businesses and offices
- Market traders
- Refuse vehicles
- Cyclists
- Disabled users (wheelchair users, visually impaired, etc)
- The young and old (vulnerable users)
- Taxis
- Night clubs/nightlife
- Special events management
- Personal security and safety

Introduction

This section outlines potential levels of intervention for the improvement of the Market Square and the surrounding area. These approaches have taken into consideration the existing context, identified issues, potential future needs, deliverability (including timescales and costs), as well as likely public acceptability and support for the scheme. Approaches have been adapted from leading guidance including by the Chartered Institution of Highways and Transportation (CIHT)* and Historic England**. It must be stressed that the illustrative sketches shown within this section are for client use only and do not represent the designs themselves. These levels of intervention are meant as a guide for the future vision and subsequent brief for RIBA Stage 02 design, allowing the client to understand the implications and high-level costs of their emerging brief and 'shopping list' for the space.

The Movement and Place Strategy

The overarching strategy is to re-balance the existing movement and place functions to help improve the ways in which the space is accessed, used and enjoyed both now and in the future.

Four practical steps have been identified to help deliver the strategy. These aim to be progressive, moving from simple, lower risk and cost-based measures through to the complete transformation of the area which will require greater resource and associated funding.

The steps are as follows:

- 1. Repave/Re-lay & De-clutter** which could be undertaken as part of a routine maintenance regime which could be implemented reasonably quickly at relatively low cost. Any repaving works would need to include improvements to the current surface drainage within the square.
- 2. Relocate / Merge Functions** which will require more consideration but could be undertaken relatively quickly and at low cost.
- 3. Re-think Traffic Management Options** which will require more consideration, engagement and consultation to ensure an appropriate blend of movement and place functions can be accommodated flexibly. This approach will require a longer programme and associated resources.
- 4. Re-Create the Space** which will require significant consideration, active, collaborative working, community engagement and consultation. Costs and timescales for such a project would be higher but the potential

* Manual for Streets 2, CIHT, 2010

** Streets for All Advice for Highway and Public Realm Works in Historic Places, Historic England, 2018

7.0 Opportunities and Levels of Intervention

7.2 Repave/Re-lay & De-clutter

Option 1



7.0 Opportunities and Levels of Intervention

7.2 Repave/Re-lay & De-clutter

Key actions to implement this option:

- ① Repave/re-lay the whole square: slabs to the central area of the square and pedestrian footpaths, setts to the carriageways. Historic setts to be relaid where possible.
- ② Restore the fountain and create a small space around it.
- ③ Remove the market refuse compactor: implement a new operational strategy for waste collection.
- ④ De-clutter the space: remove unnecessary signs, bollards, broken/unwanted pieces of furniture, relocate the litter bins that block pedestrian movements, etc.
- ⑤ Improve lighting.
- ⑥ Small changes to market layout.

Public realm levels of intervention - not intended as a design proposal. The sketch shown is intended as a means of exploring possibilities and feasibility challenges, the context for setting the vision and the ambition for the square, and as a means to set the brief for the RIBA Stage 02 concept design.



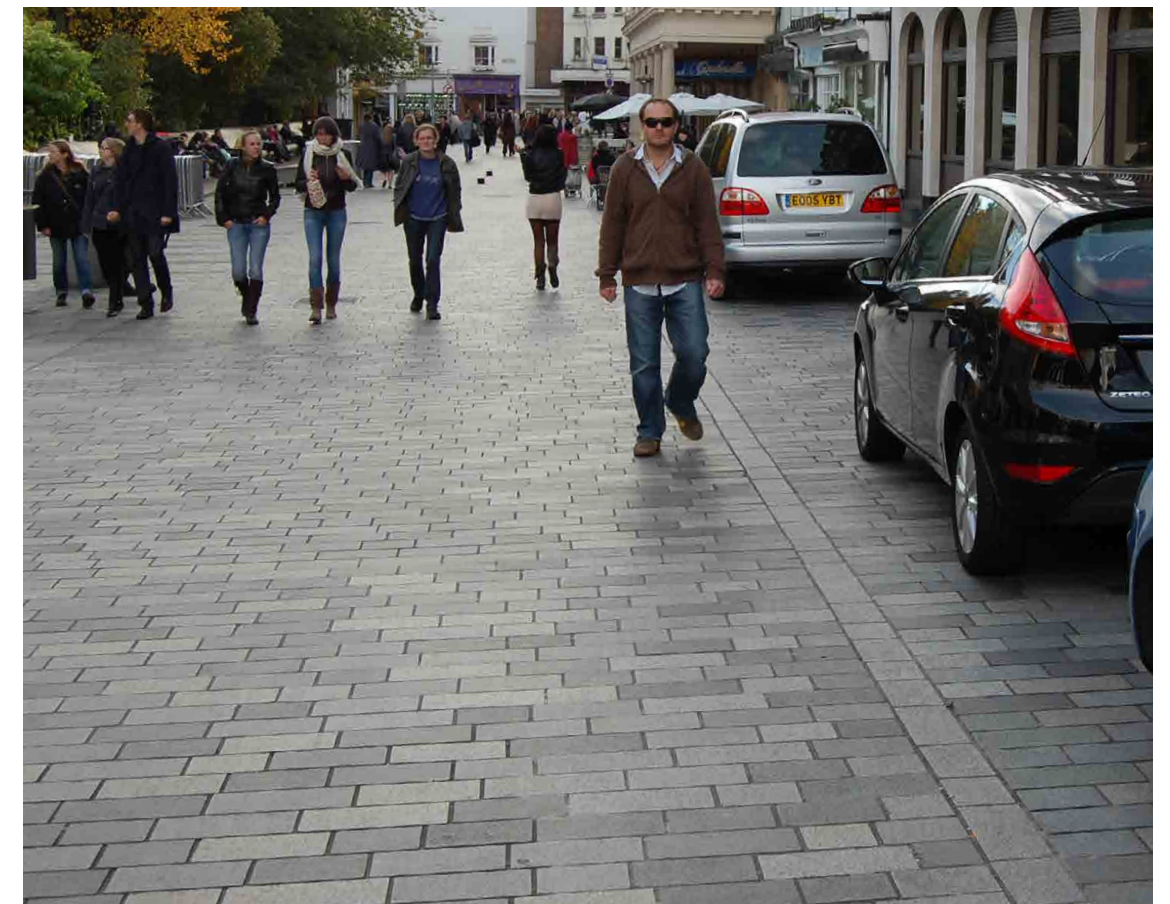
Newly paved carriageway - Mariahilferstrasse, Vienna, Austria



Vibrant market scene - Market Square, Stratford, UK



Active pedestrian space with feature paving - Stroegen, Copenhagen, Denmark



Shared surface with inset parking - New Road, Brighton, UK

7.0 Opportunities and Levels of Intervention

7.2 Repave/Re-lay & De-clutter

Option 1

Movement Needs



Overall Approach

Get rid of unnecessary road markings and bits of kit that are easy to lift and remove, including signage.

Opportunities

- Remove unwanted or broken street furniture and replace with new.
- Creating clear furniture zones.
- Repave/Repair damaged footways, drains and other important infrastructure.
- Improving market stall design.
- More thoroughly, justify each piece of equipment and obstruction with the presumption that it should be removed unless there is a clear case for retention.
- Look carefully at the need for signs, posts, guardrails, bollards and road markings.

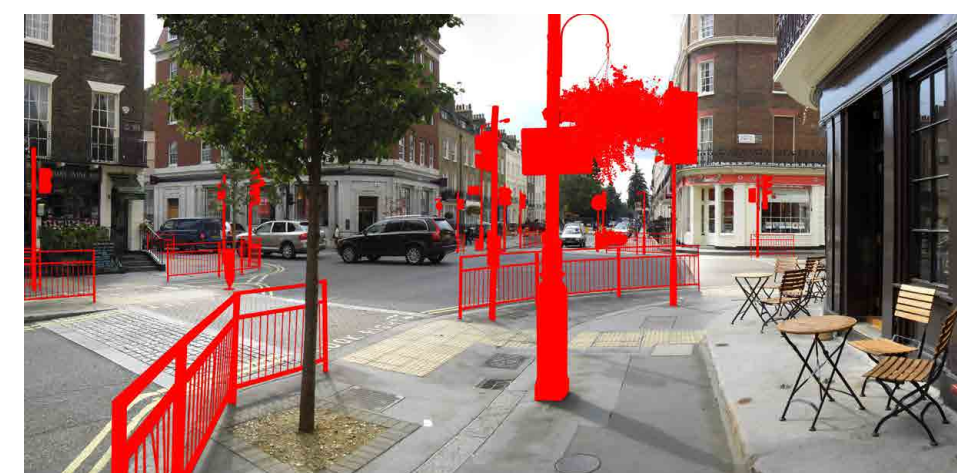
Approach Impact Assessment

This RAG diagram aims to summarise the potential impacts of this approach on place and movement functions, as well as deliverability, costs and likely public acceptability. The RAG (Red-Amber-Green) assessment takes into account the desktop study, available surveys and data, technical stakeholder discussions, site visits as well as professional judgement and extensive experience from similar projects. This assessment is seen simply as a 'tool' to aid to understanding, identify issues and potential opportunities and further considerations in a systematic manner.

| | | Existing | Proposed | |
|----------|--|----------|----------|------|
| PLACE | Market | Red | Yellow | |
| | Character | Red | Red | |
| | Quality | Red | Yellow | |
| MOVEMENT | Traffic management / parking & loading | Red | Red | |
| | Buses and taxis | Yellow | Yellow | |
| | Pedestrians and cyclists | Red | Yellow | |
| | | Poor | Average | Good |
| RISKS | Deliverability | | Green | |
| | Cost | | Yellow | |
| | Public acceptability | | Yellow | |
| | | High | Medium | Low |



A clutter free historic street in Warsaw



Street clutter identification, Elizabeth Street, London

- As the RAG assessment shows, this approach will not directly result in improved market operations or improve the sense of place. However better quality materials and furniture will improve the aesthetics and ambience of the market without changing its character, and improve pedestrian access and enjoyment.
- The removal of clutter will help reduce cleaning and maintenance costs.
- As shown in the RAG, the approach is a medium to low-cost option and which could be delivered within a reasonable time frame if phased correctly. Public support for the scheme would likely be a mixed if disruption is prolonged and results not significant.

7.0 Opportunities and Levels of Intervention

7.3 Relocate & Merge Functions & Repave/Re-lay & De-clutter

Movement Needs



Overall approach

Ensure street features and equipment work together to create a more coherent and efficient space to improve the market and local business operations and pedestrian and cyclist accessibility, particularly for vulnerable road users.

Opportunities

- Mount multiple signs on poles, walls, railings or buildings.
- Repave/Repair damaged footways, drains and other important infrastructure.
- Creating clear furniture zones.
- Improving market stall design.
- Improve the look of the market by replacing existing canopies and introducing new seating and tables.
- Relocate tour bus (Sunday only) to an alternative route
- Create shared parking, loading and taxi bays to create better turnover of spaces and reduce the impact of vehicles on pedestrians and cyclists.

Approach Impact Assessment

This diagram aims to summarise the potential impacts of this approach on place and movement functions as well as deliverability, costs and likely public acceptability.

| | | Existing | Proposed | |
|----------|--|----------|----------|------|
| PLACE | Market | Red | Yellow | |
| | Character | Red | Red | |
| | Quality | Red | Yellow | |
| MOVEMENT | Traffic management / parking & loading | Red | Yellow | |
| | Buses and taxis | Yellow | Yellow | |
| | Pedestrians and cyclists | Red | Yellow | |
| | | Poor | Average | Good |

| | | | | |
|-------|----------------------|--------|--------|-----|
| RISKS | Deliverability | Green | | |
| | Cost | Yellow | | |
| | Public acceptability | Yellow | | |
| | | High | Medium | Low |

- As the RAG assessment shows better quality materials and furniture will improve the aesthetics and ambience of the market without changing its character, and improve pedestrian access and enjoyment.
- Better management of parking, loading and taxis will decrease current competition for space, reducing conflict and congestion caused by unscheduled ad-hoc activities.
- Further improvements to street furniture will benefit cyclists and pedestrians.
- As shown in the RAG, the approach is a medium to low-cost option, albeit careful discussions and consultation with key stakeholders including the tour bus operator would be required.



Signage mounted on buildings Bergamo, Italy



A well-laid out, accessible Christmas night market in Bath

Option 1b

7.0 Opportunities and Levels of Intervention

7.4 Reorganise the Square

Option II



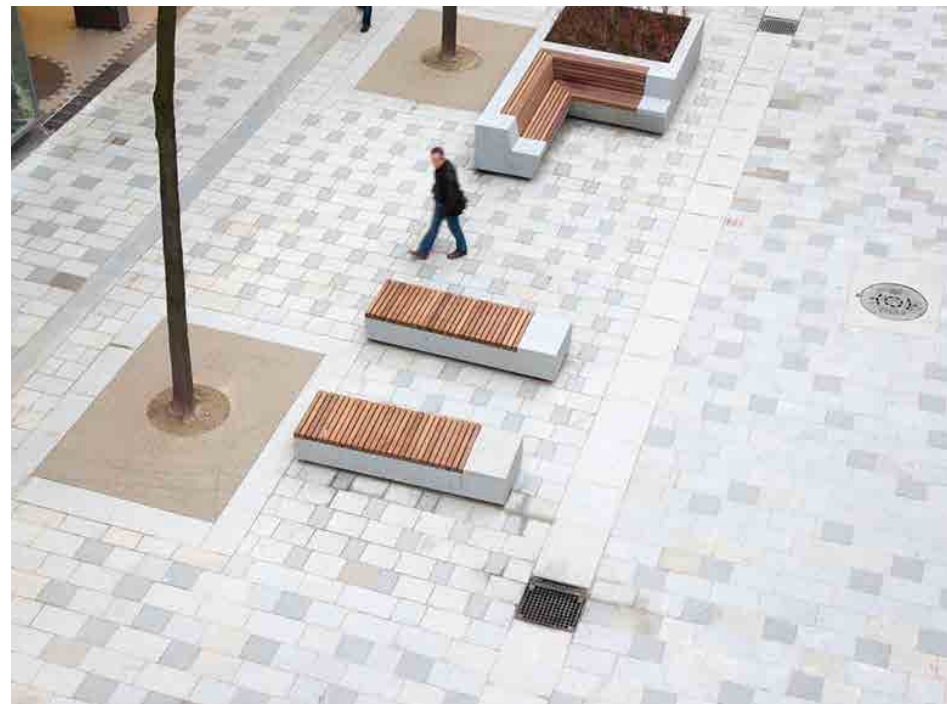
7.0 Opportunities and Levels of Intervention

7.4 Reorganise the Square

Key actions to implement this option:

- 1 Remove the carriageway of Market Hill.
- 2 Repave/re-lay the whole of the square, integrating the former carriageway into the space. Historic setts to be relaid where possible.
- 3 Declutter the space: remove unnecessary signs, bollards, broken/unwanted pieces of furniture, relocate the litter bins that block pedestrian movements, etc.
- 4 Reorganise the market.
- 5 Create space for events.
- 6 3.5m wide emergency access.

Public realm levels of intervention - not intended as a design proposal. The sketch shown is intended as a means of exploring possibilities and feasibility challenges, the context for setting the vision and the ambition for the square, and as a means to set the brief for the RIBA Stage 02 concept design.



Paved carriageway and footpath with urban furniture - Mariahilferstrasse, Vienna, Austria



Feature paving unifying the historical square - St Urbanus Kirchplatz, Germany



Feature paving and historical fountain - Place d'Armes, Montreal, Canada



Flexible terrace space on historical square - Springer Market Square, Kingston, Canada

7.0 Opportunities and Levels of Intervention

7.4 Reorganise the Square

Option II

Movement Needs



Overall approach

Consider how pedestrians, cyclists, market traders, deliveries and servicing activities use the area, and rebalance priorities.

Opportunities

- Rethink restrictions and arrangement for motorised vehicles.
- Prioritise business / market / emergency access / sustainable modes.
- Rethink one-way and two-way access arrangements.
- Rethink waste / mass cycle parking / storage locations.
- Rethink parking and loading provision, with greater priority given to local businesses, people with disabilities and sustainable mode users.
- Rethink carriageway widths, alignments and material types to improve pedestrian and cyclist access and market operations.

Approach Impact Assessment

This RAG diagram aims to summarise the potential impacts of this approach on place and movement functions, as well as deliverability, costs and likely public acceptability.

| | | Existing | Proposed | |
|----------|--|----------|----------|------|
| PLACE | Market | Red | Green | |
| | Character | Red | Yellow | |
| | Quality | Red | Green | |
| MOVEMENT | Traffic management / parking & loading | Red | Yellow | |
| | Buses and taxis | Yellow | Red | |
| | Pedestrians and cyclists | Red | Green | |
| | | Poor | Average | Good |
| RISKS | Deliverability | Yellow | Green | |
| | Cost | Yellow | Green | |
| | Public acceptability | Yellow | Green | |
| | | High | Medium | Low |

- As the RAG assessment shows, this approach focuses on moving away from a traffic and parking focused regime to one that prioritises people and reduces the negative impacts of motorised vehicles in this confined space.
- New traffic management will promote the emerging Cambridge Streets and Spaces SPD principles, including the use of sustainable modes for deliveries, servicing and general access within the historic core.
- Existing permit provision, location of existing parking, loading, taxis and storage will require consideration with the aim of relocating, rationalising and reallocating further space for Market Square to breath.
- This approach would require further additional funding to enable a comprehensive engagement and consultation process to be

undertaken. A detailed traffic management strategy alongside public realm design options for Market Square will also be required

- Such an approach will require buy-in and sign-off from a number of key stakeholders including Cambridgeshire County Council, Cambridge University and Colleges, taxis and the tour bus provider.



Cargo delivery bike



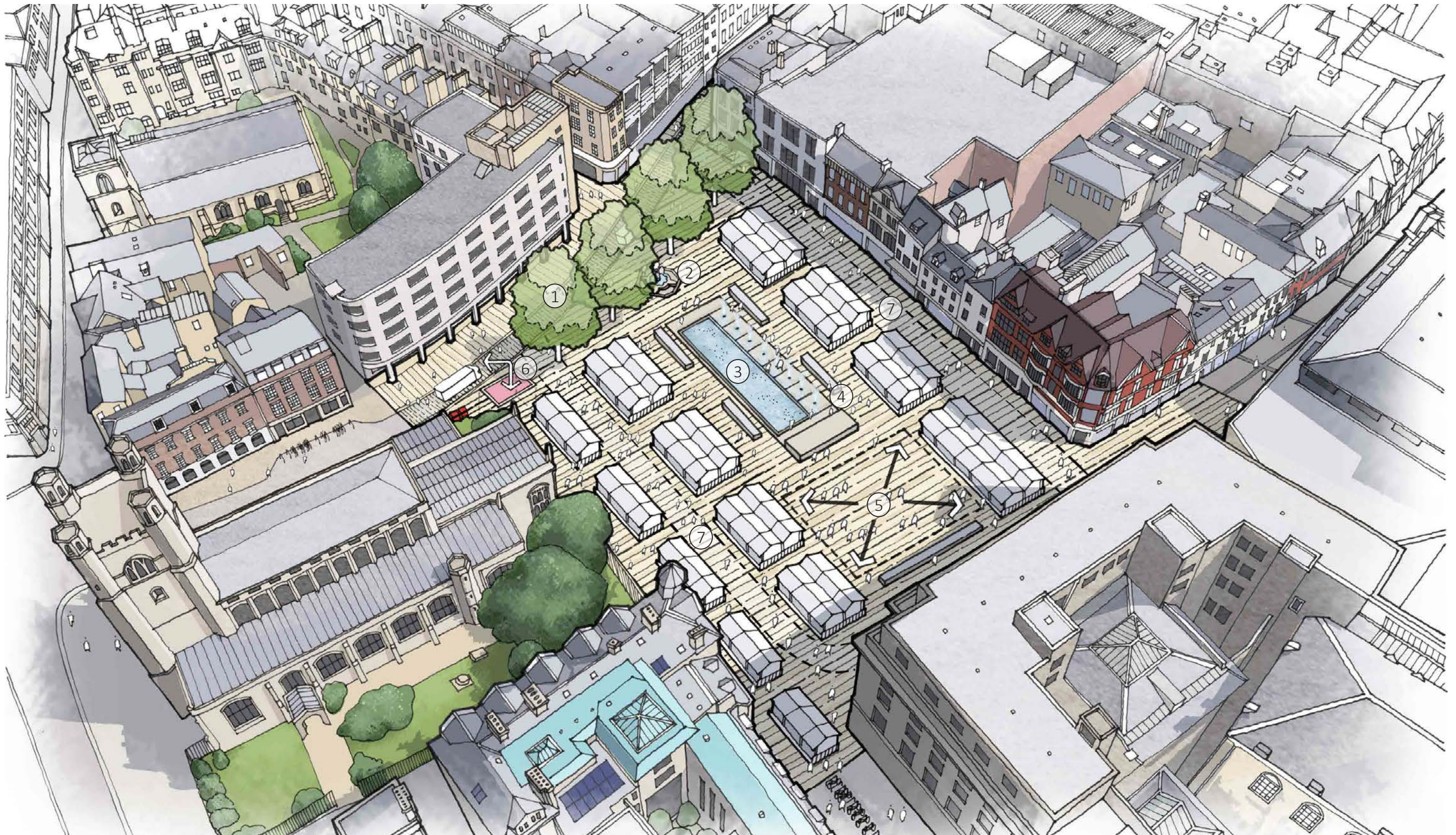
Union Square Green Market, New York

7.0 Opportunities and Levels of Intervention

7.0 Opportunities and Levels of Intervention

7.5 Re-create the Square - Landscape features

Option III



7.0 Opportunities and Levels of Intervention

7.5 Re-create the Square - Landscape features

Key actions to implement this option:

- ① Line of trees to frame the square.
- ② Relocate the fountain.
- ③ New water feature to the centre of the square.
- ④ Benches throughout the space.
- ⑤ Create a new space for events.
- ⑥ Relocate the market compactors below the ground.
- ⑦ 3.5m wide emergency route



Water feature- Place de la République, Paris, France



Flexible space for temporary events- Watford Parade, UK

Public realm levels of intervention - not intended as a design proposal. The sketch shown is intended as a means of exploring possibilities and feasibility challenges, the context for setting the vision and the ambition for the square, and as a means to set the brief for the RIBA Stage 02 concept design.



Market square with central water feature - Stratford Market Square, Ontario Canada



Seating space with urban trees - Watford Parade, UK

7.0 Opportunities and Levels of Intervention

7.6 Re-create the Square - Large infrastructure

Option IV



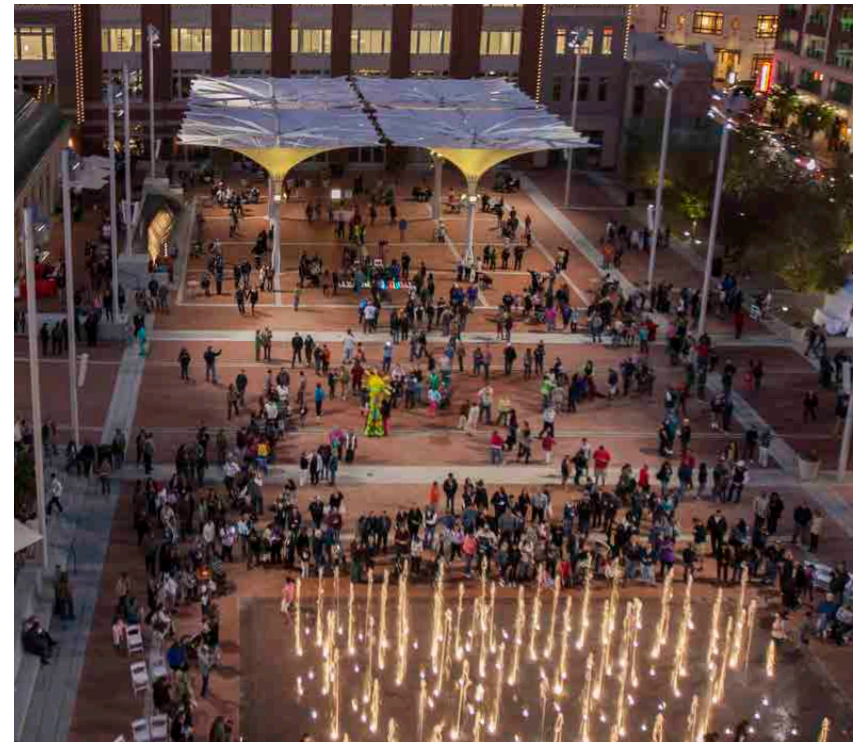
7.0 Opportunities and Levels of Intervention

7.6 Re-create the Square - Large infrastructure

Key actions to implement this option:

- ① Line of trees to frame the square.
- ② Relocate the fountain.
- ③ New water feature to the centre of the square with potential restoration of the Hobson conduit.
- ④ Benches throughout the space.
- ⑤ Canopy sheltering a new space for events.
- ⑥ Ecocycle - underground cycle parking.
- ⑦ Relocate the market compactors below the ground.
- ⑧ 3.5m wide emergency route.

Public realm illustrative concept - not intended as a design proposal. Sketch shown is intended as a means of exploring possibilities and feasibility challenges, the context for setting the vision and the ambition for the square, and as a means to set the brief for the RIBA Stage 02 concept design.



Flexible market square with water feature and canopy - Sundance Square Plaza, USA



Underground Ecocycle



Canopy sheltering part of Bishop's Square, London, UK



Water jets on Old Market Square, Nottingham, UK

7.0 Opportunities and Levels of Intervention

7.6 Re-create the Square

Option III & IV

Movement Needs



Overall approach

This approach involves the total remodel of the space, creating a very different place that supports and enhances the market, placemaking and heritage assets.

This approach prioritises sustainable access and movement as well as specialist events and a tourism strategy.

Opportunities

- Through careful, sensitive and collaborative design, create a space that prioritises pedestrians and creates sufficient flexibility to support existing and future local needs, namely the market, local businesses and local residents.
- Put in place a comprehensive tourism management strategy in line with the emerging Cambridge Streets and Spaces SPD to encourage more sustainable tourist-related activities.
- Actively design in better emergency access.
- Support an eco-market including deliveries and servicing by more sustainable modes, as well as improved storage and waste management.

Approach Impact Assessment

This RAG diagram aims to summarise the potential impacts of this approach on place and movement functions, as well as deliverability, costs and likely public acceptability.

| | | Existing | Proposed | |
|----------|--|----------|----------|------|
| PLACE | Market | Red | Green | |
| | Character | Red | Green | |
| | Quality | Red | Green | |
| MOVEMENT | Traffic management / parking & loading | Red | Green | |
| | Buses and taxis | Yellow | Red | |
| | Pedestrians and cyclists | Red | Green | |
| | | Poor | Average | Good |
| RISKS | Deliverability | Red | Red | |
| | Cost | Red | Red | |
| | Public acceptability | Green | Green | |
| | | High | Medium | Low |

- As shown in the RAG, this scheme has the ability to provide a high-quality space that fully meets the existing and future needs of the market, local businesses and residents and one that fully celebrates and builds on the important local heritage and character.
- This approach will, however, require sufficient funding, a comprehensive engagement and consultation strategy and a design team with a contemporary and sympathetic design approach to ensure the deliverability of a scheme that key stakeholders will support.



Small scale electric waste removal vehicle



Watford Parade flexible space, BDP and Urban Flow led scheme

7.0 Opportunities and Levels of Intervention

8.0 Financial Viability Assessment

8.1 Outline Cost- Cambridge Market Square

8.2 Cost Assessment- Cambridge Market Square

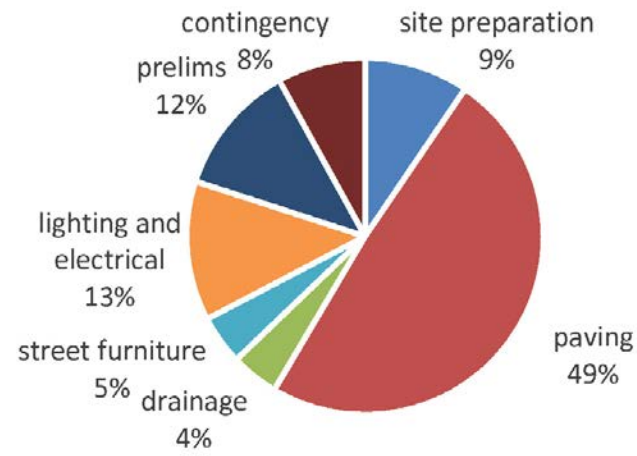
8.0 Financial Viability Assessment

8.1 Outline Cost - Cambridge Market Square

The costs presented here are for works to Cambridge Market Square only. This area is defined by the site boundary indicated on page 10 of this document.

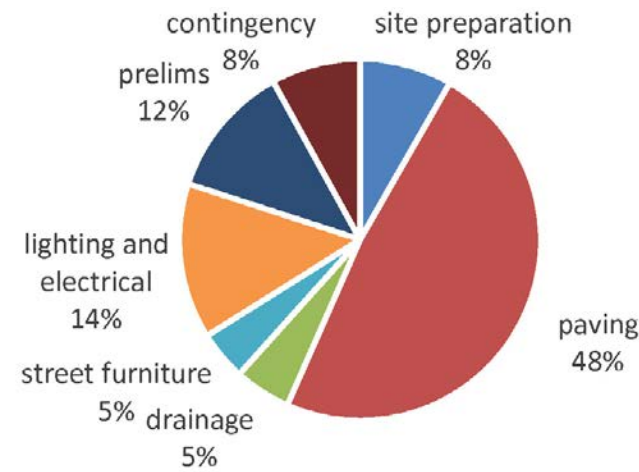
The indicative high-level costs shown within this section of the document are intended as a guide for the emerging vision and brief for RIBA Stage 02. It is recommended that a Quantity Surveyor is appointed at Stage 02 to provide clarification and firm guidance on the emerging costs associated with any given design. Costs indicated within this section of the document cover implementation only, exclusions are indicated on the following page.

Repave/Re-lay & De-clutter



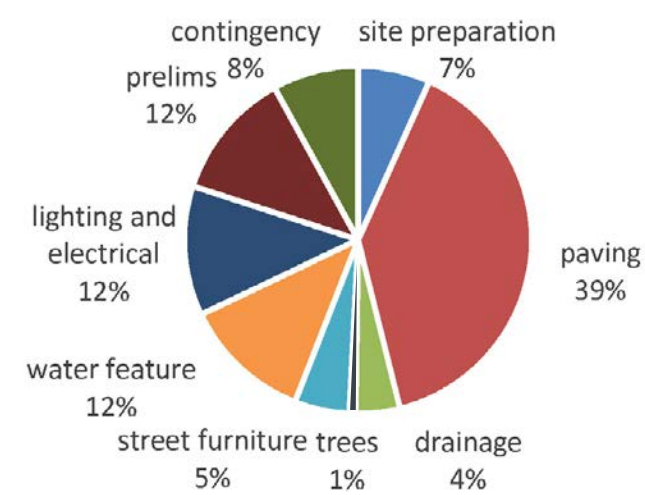
£2,944,00.00

Reorganise the Square



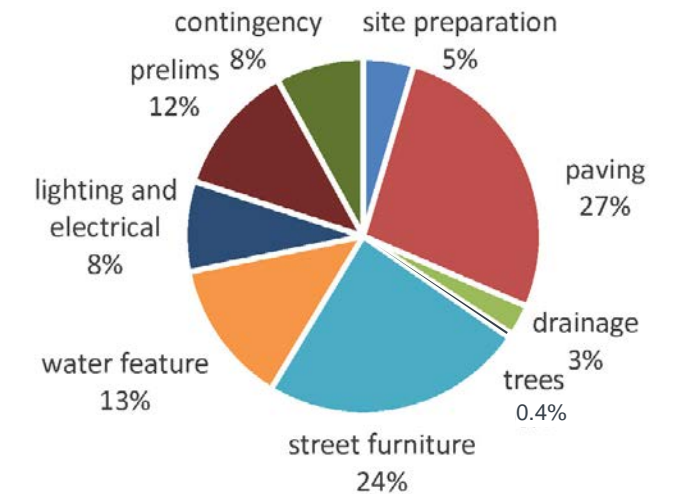
£3,381,812.50

Re-create the Square - Landscape features



£4,151,813.00

Re-create the Square - Large infrastructure



£6,089,312.50

8.0 Financial Viability Assessment

8.2 Cost Assessment - Cambridge Market Square

The costs presented here are for works to Cambridge Market Square only.

Total implementation area

Total site area 5675 m2 totals

Length of street 0 ml

No of market pitches 99 no

| | | | Repave/Re-lay & De-clutter | Reorganise the Square | Re-create the Square - Landscape features | Re-create the Square - Large infrastructure |
|--|-----|-----|---------------------------------------|------------------------------|--|--|
| Site preparation | | | £279,700.00 | £279,700.00 | £279,700.00 | £279,700.00 |
| Paving | | | £1,446,250.00 | £1,634,500.00 | £1,634,500.00 | £1,634,500.00 |
| Drainage | | | £128,000.00 | £171,000.00 | £171,000.00 | £171,000.00 |
| Trees | | | £0 | £0 | £24,000 | £24,000 |
| Street furniture - including Fountain/Refuse/Water features/Canopies/Eco Cycle | | | £132,250.00 | £150,250.00 | £712,250.00 | £2,262,250.00 |
| Lighting/Electrical | | | £374,000.00 | £470,000.00 | £500,000.00 | £500,000.00 |
| Sub Total | | | £2,360,200.00 | £2,705,450.00 | £3,321,450.00 | £4,871,450.00 |
| Prelims and overheads | Sum | 15% | £353,280.00 | £405,818.00 | £498,218.00 | £730,718.00 |
| Site works contingency | Sum | 10% | £235,520.00 | £270,545.00 | £332,145.00 | £487,145.00 |
| Implementation total | | | £2,944,000.00 | £3,381,812.50 | £4,151,813.00 | £6,089,312.50 |
| Cost per m2 (area = m2) | | | £519 | £596 | £732 | £1,073 |

*Items not included;

Permissions and legals

Additional survey costs and trial holes

Major utility diversions/significant below ground restrictions

Archaeology

Relocation of market stalls/temporary market setup

New market stalls

Consultancy fees

8.0 Recommendations & Conclusions

8.1 Conclusion

8.2 Recommendations

8.3 Recommended next steps

9.0 Conclusions and Recommendations

9.1 Conclusions

This feasibility study summarises how Market Square is used today. Subsequent stages of the design process need to use the findings within this study to help define the brief and vision for RIBA Stage 02.

Change for the city's historic core and Market Square is forthcoming; the 2018 Local Plan promotes sustainable, positive change as part of the vision for the City of Cambridge. This change is, in part, as a consequence of Cambridge's success as a world-leading city, with a growth in resident and visitor numbers being recorded year-on-year. As such the Local Plan and current planning policy seek to protect the city's rich heritage from this pressure, safeguarding its rich heritage and its highly cherished public open spaces. Market Square is a key part of this public open space network and the setting of the vision for the city centre.

As a space Market Square holds its own challenges. It accommodates a busy and successful market, resident and student accommodation and high levels of tourism. Accommodating these uses in the square's current configuration results in conflict between users, with vehicle operations dictating the quality and usability of the public space available. As such the square, whilst being civic in nature, does not fulfil this civic role the city aspires it to undertake.

Regardless of the challenges there are clear opportunities for improvement. By re-evaluating the movement and place functions of the space the square can be re-imagined, as long as there is the ambition to do so. Redefining the public highway, enhancing the design of the market and improving services and facilities within the space are just some of the changes that will improve the square. These changes would allow the opportunity for new spaces to be created which would give further opportunity for landscape features such as furniture, trees and lighting.

Feasibility Study Key Findings;

- The square and associated market is historically important to Cambridge being inherently linked to the character of the city centre.
- The square is rich in architectural character, the listed buildings of Great St. Marys, the Guildhall, and the Grade II listed central fountain are key assets which should be protected.
- The central market provides animation to the space and its informal character positively contributes to the city centre.
- Previous proposals for the Market Square have faced opposition/objection(s) from key stakeholders. These objections have been enough to undermine the respective schemes.
- Current licencing of traders is indefinite, the City Council is therefore unable to cancel existing agreements.
- Listed buildings and features are not celebrated and the Grade II listed fountain is concealed by the configuration of the market. Historic

England will require early engagement if the Grade II listed fountain is to be relocated. Relocation of the fountain would likely receive stakeholder objection.

- Carriageway of Market Hill is disproportionately wide when compared to the adjoining pavements. As a prohibited street for trading, Market Hill requires legal agreement for any potential change in its use. Despite this, Market Hill is a key opportunity space for the square.
- Management of parking, loading and taxis compete for space with pedestrian and cycle uses. Conflict and congestion is caused by unscheduled ad-hoc vehicular activities.
- Pedestrian permeability is difficult and non-intuitive. No accessible route exists within the market and the current road profile incorporates raised kerbs which obstruct wheelchairs. The central market space is congested and restrictive for all but those able-bodied.
- The quality of the pavement surface is mixed; the area of natural stone setts, located within the centre of the square, is currently being considered for listed status protection. This surface is in need of being re-paved due to evidence of subsidence.
- The current surface drainage system is inadequate being prone to flooding, current surface drainage system requires improvement.
- Significant excavation within the square will hold a high level of risk due to known constraints and archaeological interest, consider mitigating where possible to avoid existing utilities and known basement structures. Archaeological analysis is likely to be required at 1500mm – 3000mm deep.
- It is likely that a large canopy above the market area would be unachievable. This would encounter significant stakeholder objection.
- Below ground refuse containment is an achievable objective for the scheme, it should encounter little resistance from stakeholders as there is an effective precedent of its application within Cambridge.
- Below ground cycle storage will likely incur significant construction and maintenance costs which would likely outweigh the schemes benefits.
- Market stalls are fixed, resulting in little opportunity for the diversification uses beyond that of the market.
- The Market Square is perceived as a 'no go area' after dark, where anti-social behaviour is an issue.

Interpreting the design matrix – Sections 6 & 7 levels of intervention

The levels of intervention represented within the final stages of the study should not be seen as designs themselves, but instead viewed as degrees of change that the Market Square could develop towards. These interventions are a means to provide background for the future setting of the vision for the space.

1. Repave/relaying and declutter – the space retains its current layout (low to medium cost / lower risk / short to medium term intervention)

Subtle change to the character of the space could be delivered in the short-term at lower cost and risk, to help deliver 'quick win' changes to address existing, pressing issues whilst more substantial funding is being sort for more complicated, time consuming and costly measures. This helps show the local community that there is intent to address their issues and concerns in considered manner. However, repaving/relaying and repairs to existing pavement surfaces would still incur a substantial construction cost and the public perception may question its worth if an appropriate level of change cannot be seen. Public support for the scheme would likely be a mixed if disruption is prolonged and results are only seen as temporary.

2. Repave/relaying, declutter & relocate and merge functions – The space retains its current layout (low to medium cost / lower risk / short to medium term intervention)

Reconsideration of existing traffic and parking management will help to unlock much needed space and address more substantial existing market and local business issues, safety and other constraints. This approach could be delivered in the short to medium term and include temporary trials to test the potential changes, impacts and obtain local buy-in and wider on-going support if appropriately programmed and managed. These works could commence ahead, and independently, of any costly re-paving / construction works, potentially acting as an initial marker for more substantial change. In addition this could help build awareness and support for longer-term more visionary changes.

3. Reorganise the square – the space adopts a new layout (medium cost / medium risk / medium-term intervention)

This approach focuses on a more longer-term rebalancing of movement and placemaking functions. In this approach, the space will be reorganised to help support existing as well consider future needs and aspirations of the market, businesses and the wider community. This approach represents a medium cost and risk option that would require comprehensive engagement and consultation to help ensure greater success. As such the approach would require a comprehensive engagement programme, on-going buy-in and sign-off from a number of key stakeholders and the local community. To reduce risks, temporary trials and community-led schemes could be undertaken prior to undertaking more significant / permanent changes but will require careful planning, management and monitoring.

9.0 Conclusions and Recommendations

4. Re-create the square – the space adopts a new layout (higher cost / higher risk / longer-term intervention)

This scheme has the ability to deliver a high-quality public space that fully addresses the existing as well as future needs and aspirations of the market, local businesses and wider community. Whilst, this approach will require substantial funding, associated planning and a comprehensive engagement strategy, it has much greater potential for safeguarding this important asset in the longer term and ensuring future generations can continue to enjoy this invaluable space.

management, design complexity, incur more substantial costs and hold a more challenging route in terms of agreements. However, as identified in this study, through a well-considered, managed, fully collaborative and phased approach, the longer term viability and sustainability of Market Square, as well surrounding streets and spaces, and Cambridge as a whole will be much more pronounced and long-standing.

9.2 Recommendation

Levels of intervention Recommendation – a collaborative and phased approach.

It is recommended that prior to commencing further design work, stakeholder and community visioning exercises coupled with a robust process of bespoke engagement should be set in motion in order to define the aspiration for the square and therefore the level of change proposed. In addition, it is recommended that a funding strategy and associated programme is identified, with the aim of continuing to deliver ‘quick-win’ improvements, test and trial options on-street and help address existing, pressing issues and complaints. In doing so, this approach also helps to obtain and, importantly, maintain local support, whilst funding is sort for more longer-term, complex and costly interventions.

It is recognised that much needed drainage and pavement works are required as soon as possible to improve existing market conditions and address existing safety concerns. However, how these works are perceived by the public will be determined by both the final outcome, and the process undertaken to achieve it; resurfacing the square to its current layout would still hold significant construction costs whilst not addressing some of the current issues regarding space and placemaking or known future aspirations expressed by key stakeholders and the local community. Combining the works required within a bolder vision for the space is a clear opportunity, particularly if the final outcome is to align with local policy and the emerging SPD.

On this basis the ‘level of intervention’ the City Council and its partners should be striving towards one that fully rejuvenates this invaluable public space (levels ‘reorganise/recreate’). This more visionary approach needs to take account of its extraordinary historical assets and heritage but also, importantly, look to the future, embracing change (as it has in the past) to ensure this remarkable space continues to adapt and evolve sustainably, whilst continuing to support today’s market, businesses and local community. This approach would require a greater level of project

9.0 Conclusions and Recommendations

9.3 Recommended Next Steps

Setting a Vision

There is a need to establish an agreed, clear vision and objectives for the scheme, which respond to the complex and competing requirements in this mixed-use environment. The aim to successfully balance the movement and place functions by prioritising pedestrian and cyclist movement while making it easier for businesses and the market to operate effectively.

It is recommended that visioning workshops with technical stakeholders and the community are arranged prior to design progression to develop and agree a vision and objectives for the scheme.

Tailored Engagement

A robust engagement strategy is planned for the scheme, however it is recommended that this engagement strategy should become tailored against the agreed vision for the space once established. Elements such as introducing a canopy, or moving the listed fountain will require detailed engagement with English Heritage and other key stakeholders, proposals for below ground cycle parking or refuse containment will require engagement with city operators and local businesses. As examples, these bold design moves will be, in part, defined the vision for the space and its resulting objectives.

Failure to engage on project specifics, such as these bolder elements, would derail or at worst terminate project progression. It is therefore crucial that a detailed engagement and consultation strategy is identified at the earliest stage and prior to further design development. This approach will ensure that an open, honest and two-way dialogue with stakeholders and the project team can be maintained throughout the project lifecycle.

The engagement strategy should include the following key items and undertakings:

- Preparation of a 'live' detailed and bespoke engagement and consultation strategy and ongoing programme.
- Maintenance of a 'live' list of important community stakeholders that require engagement and consultation.
- Engage with the community Market Square project steering group to work with the project team throughout the project lifecycle. This group should include representatives from the business and market community, residents, disability groups, cycling representatives, students/young people and councillors. This group should aim to meet regularly to maintain communication, discuss issues and input into the design process.

- Identify, procure and manage engagement and consultation activities and events, report and engage with the client and project design team.
- Vision setting and early engagement with English Heritage and Colleges to assess the viability for larger infrastructure elements – cycle storage/canopy/moving the listed fountain.

The Market and Business Community

It is recommended that a Market and Retail specialist is identified to work with the project team, the project community engagement specialist, the market manager, market traders and local businesses to undertake the following crucial activities:

- One-to-one interviews and/or surveys and workshops with individual market traders and local businesses to identify existing arrangements, issues, concerns and potential opportunities for change.
- A market and local business assessment including economic performance, an operational review, consumer research and benchmarking against other cities to identify issues, opportunities and recommendations for improvements.
- Working with market traders, the identification of a market relocation strategy for during construction, a market layout strategy and an ongoing licensing and management strategy.

Scheme Trials and DIY Streets

It is recommended that, where reasonably feasible, trials and/or community 'DIY' street design events are undertaken to enable local people to test possible solutions and be actively involved in the design process. This may include:

- Temporary changes to the market stall location and layouts.
- Temporary road closures to host pop-up events.
- Areas of carriageway turned into temporary 'parklets' to provide additional seating space near market stalls/local businesses. This would highlight/advertise the potential for reclaiming usable public space for pedestrians.

Surveys recommended - Stage 02

- Undertake a condition survey of the drains and cobbles/setts.
- Undertake a condition survey of the structural integrity of known undersailing basements.
- Highmast Camera Surveys to monitor current vehicular use and behaviour
- Ground Penetration Radar (GPR) Surveys.

9.0 Conclusions and Recommendations

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Technical Stakeholder/Officer Engagement

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