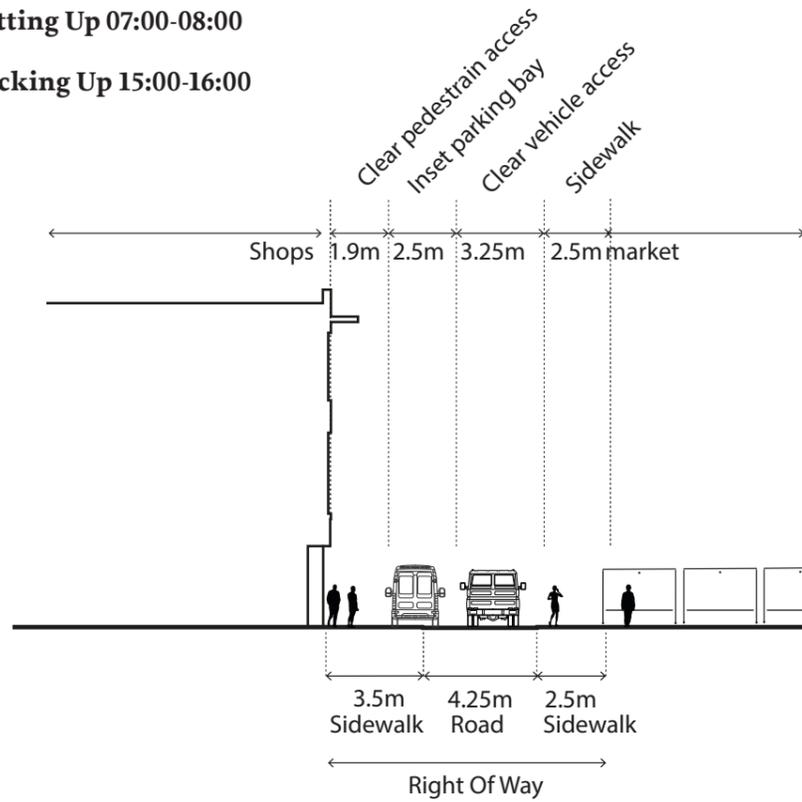
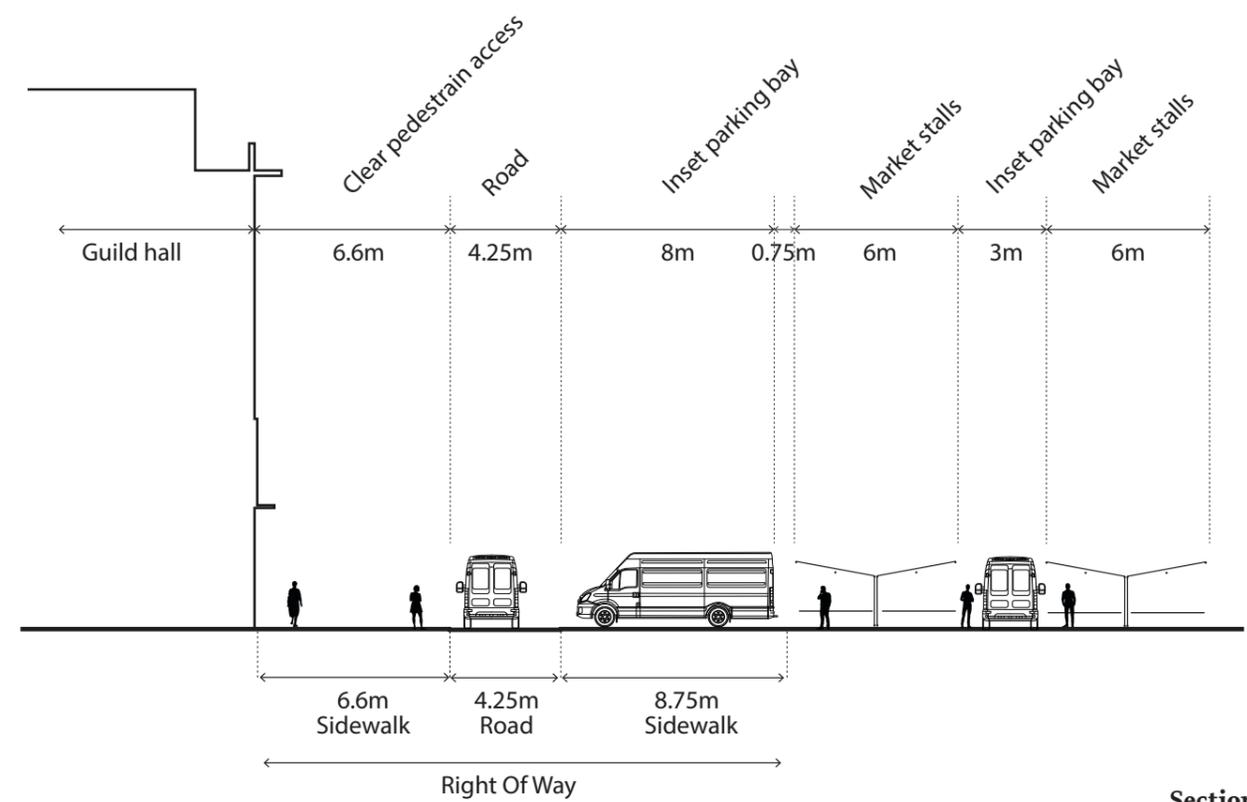


Market Setting Up 07:00-08:00

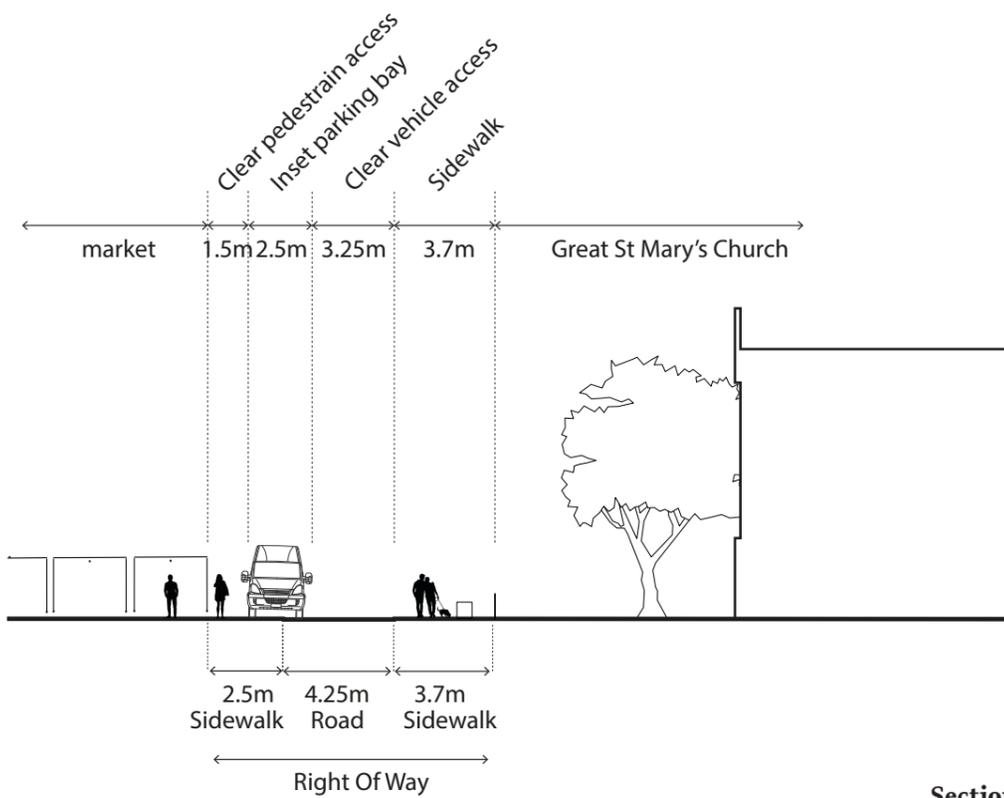
Market Packing Up 15:00-16:00



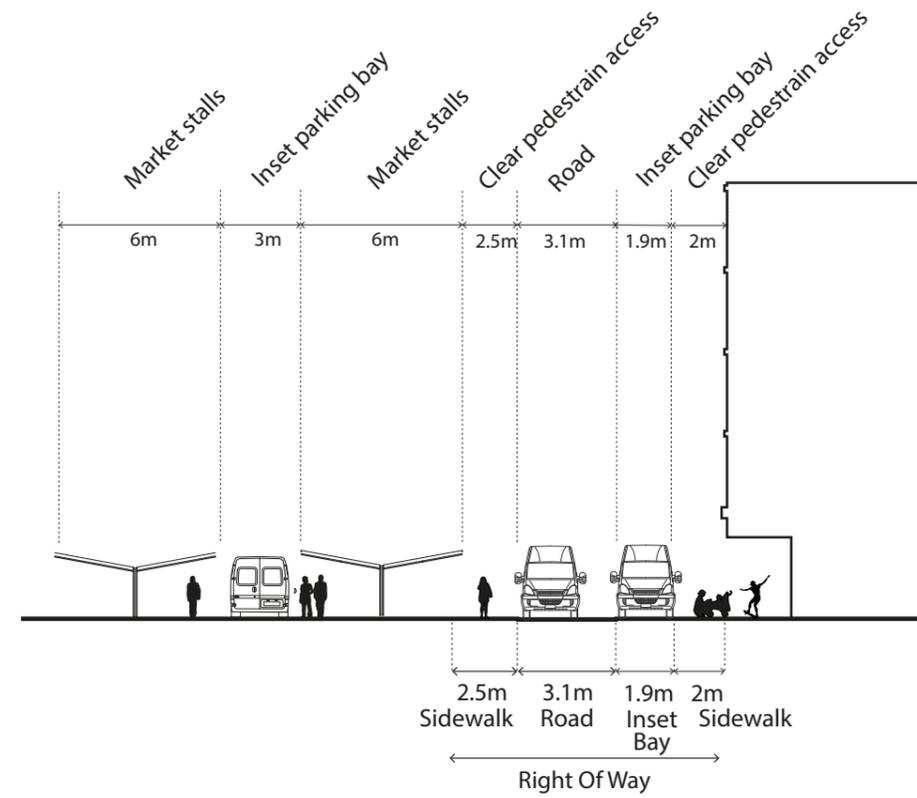
Section A-A



Section B-B



Section C-C

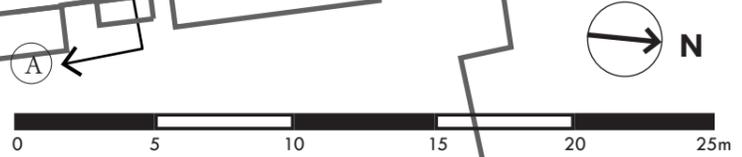


Section D-D

Loading and unloading sections

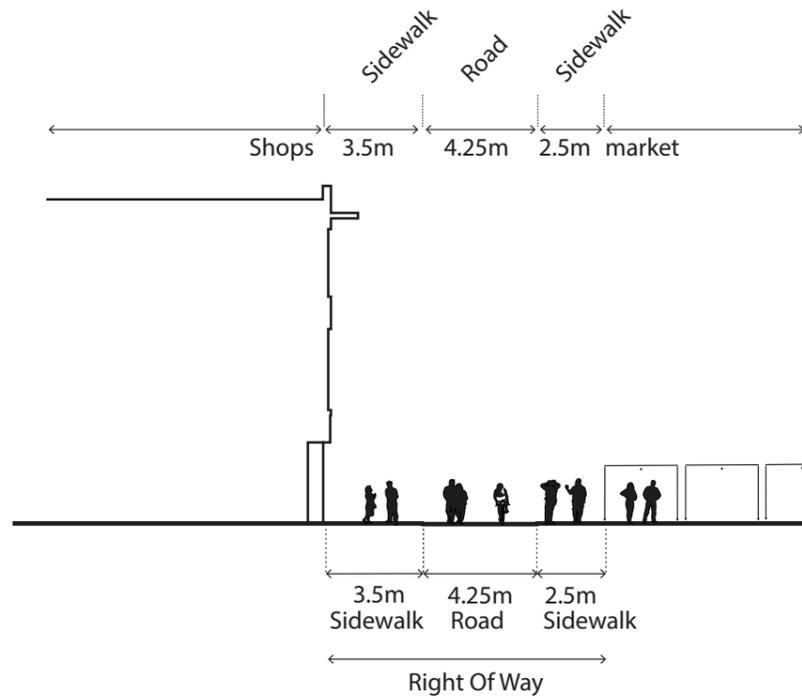


Loading and unloading locations

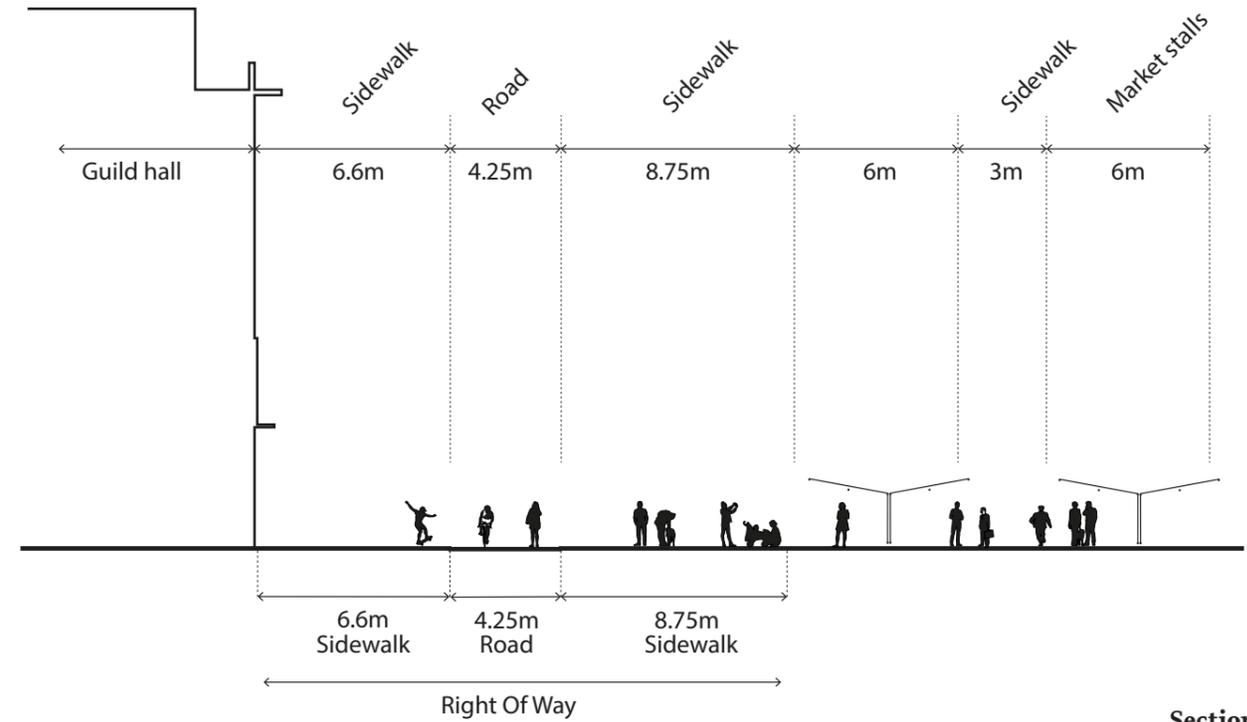


Market Trading Hours 08:00-15:00

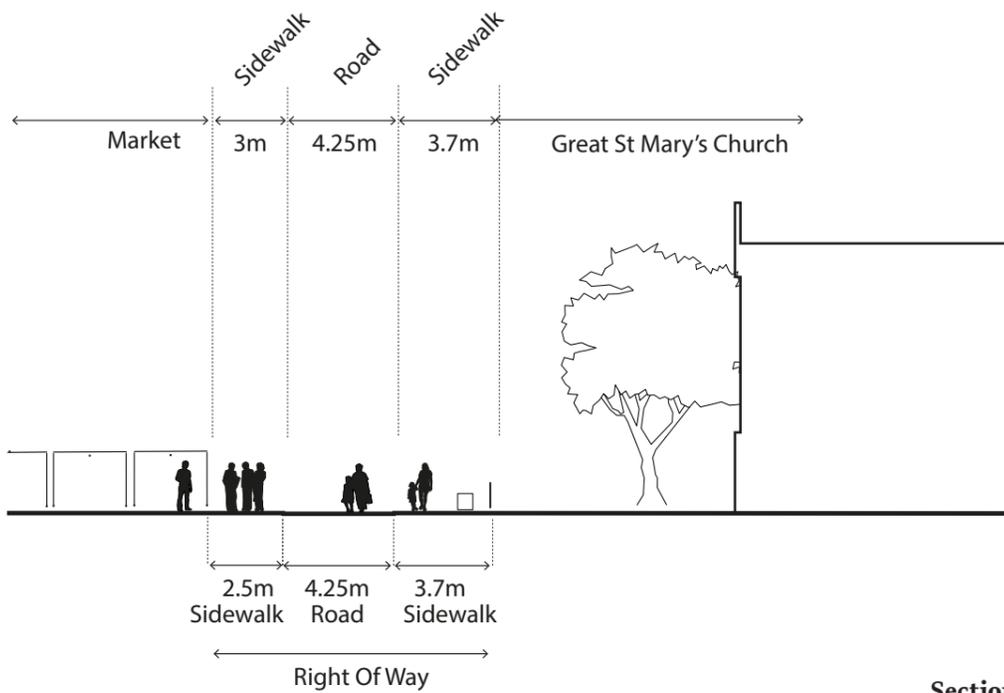
Out of Hours 16:00-07:00



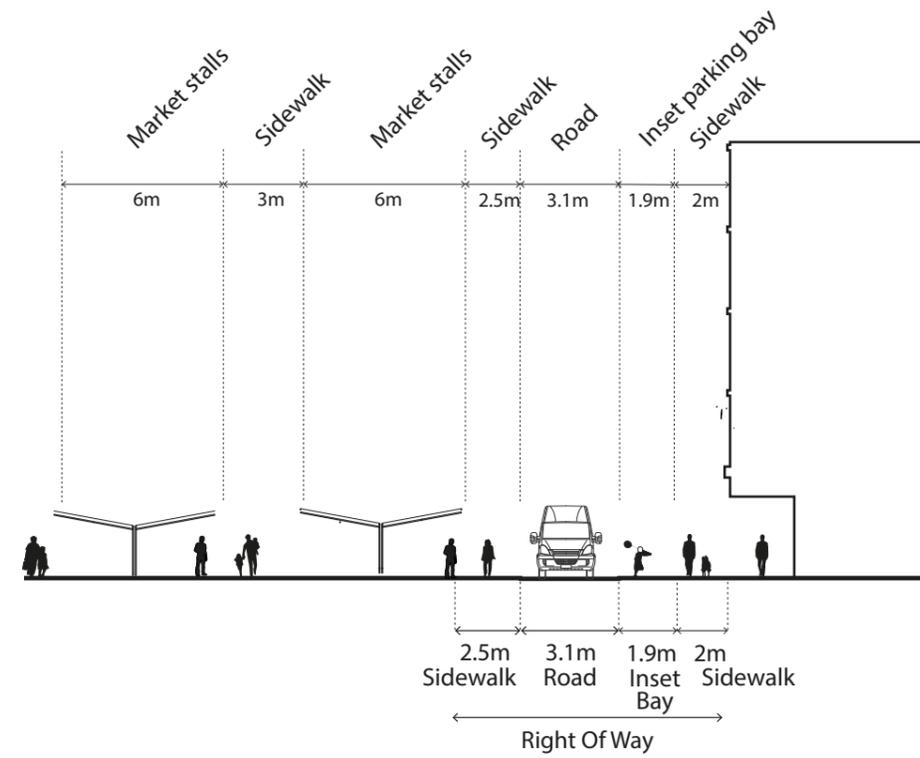
Section A-A



Section B-B

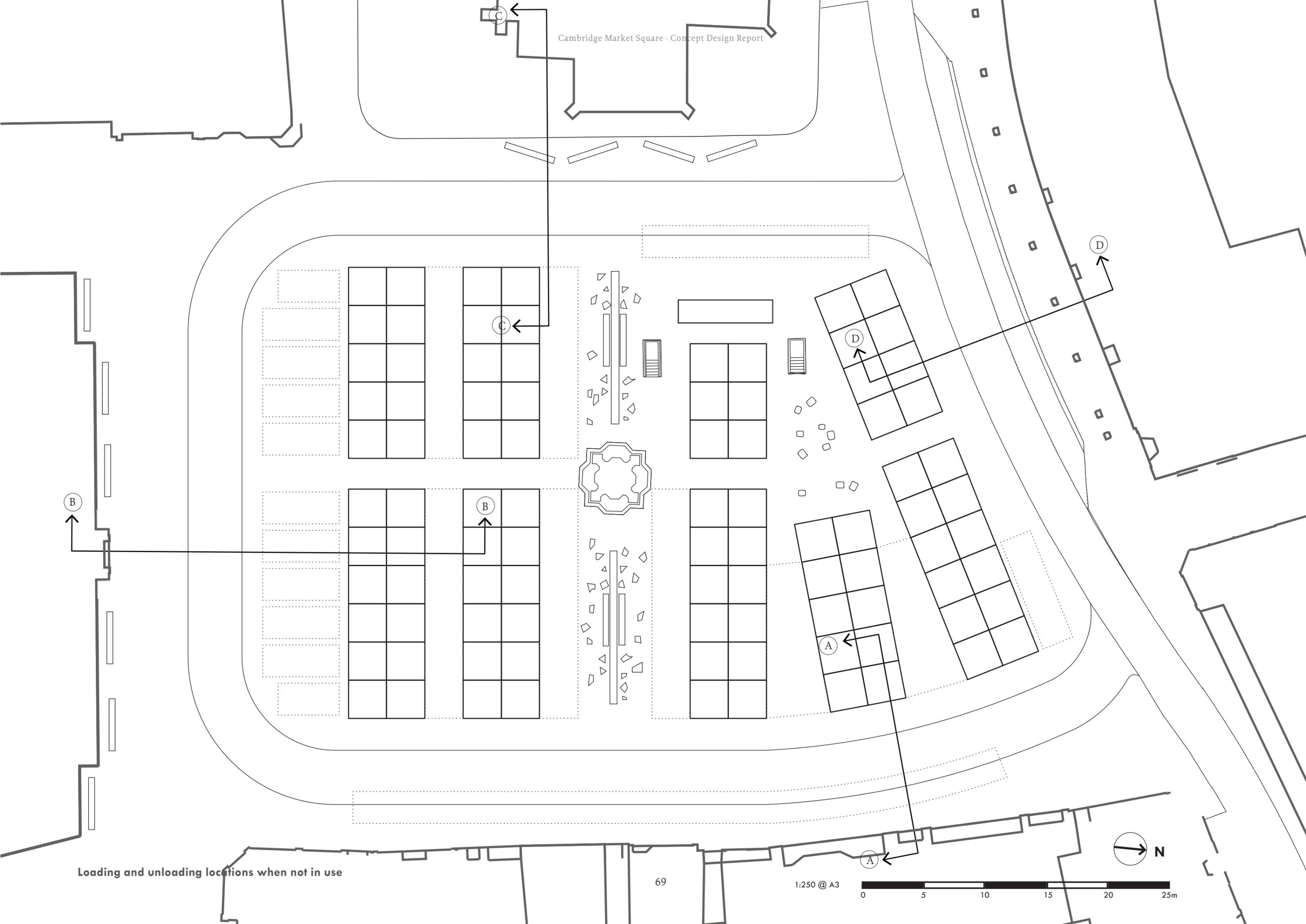


Section C-C



Section D-D

Proposed sections



Loading and unloading locations when not in use

6.3 Cycle Access

Existing Cycle Access

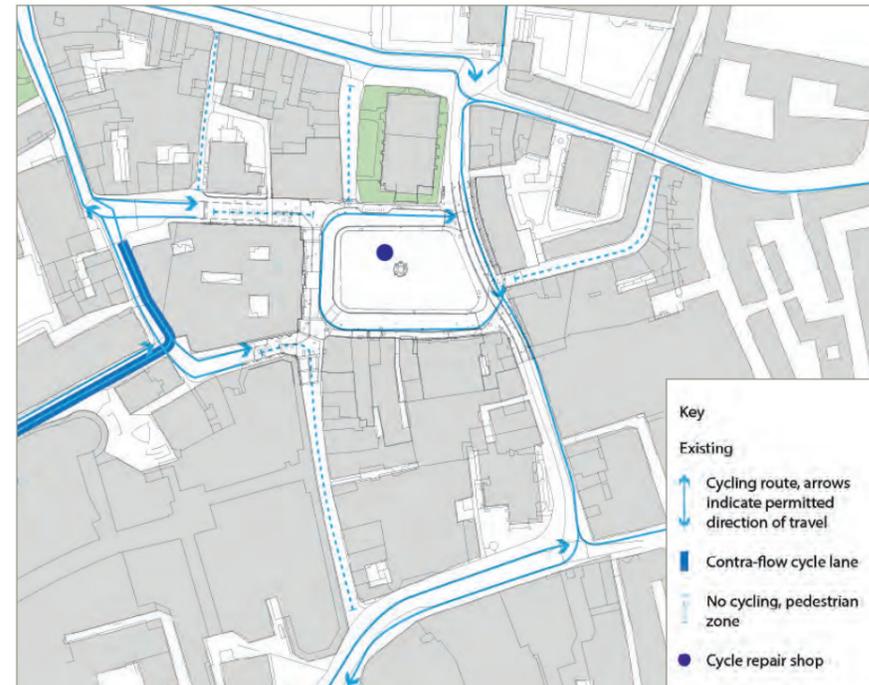
Currently the market square is littered with bikes parked in ad-hoc ways, attached to fences, lampposts, market stalls etc. In order to rationalise what is currently happening and de-clutter the market square it is proposed to move a number of the cycle parking racks to streets that run adjacent to market square.

Proposed Cycle Access

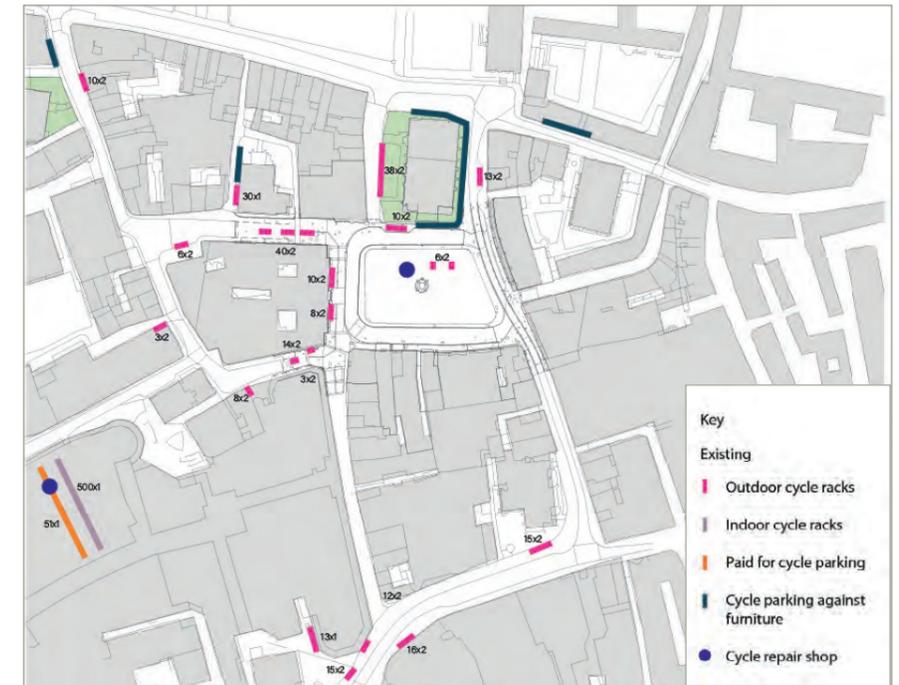
Part of the overarching strategy is to minimise the potential accidents between pedestrians and other forms of transport and that involves reducing the number of bikes which cycle around Market Square. This is in part achieved by repositioning a number of bike racks away from the central market area so that those who are visiting Market Square by bike don't need to traverse the square in order to find somewhere to park their bikes.

Next Steps:

- * Further investigation of the proposal to move some of the cycle racks to Peas Hill will require undertaking a detailed study looking at the exact proposed locations and ascertain any possible conflict from a technical perspective. For example, whether it will create a problem with the light wells which run alongside the Guildhall building on the Peas Hill side.
- * Review existing bike racks and compare with other options for a more space-efficient alternative



Existing Cyclist Access



Existing Cycle Parking

Cambridge City Centre is largely accessible by bike and cyclists have access to a number of city centre streets where motor vehicle access is restricted. As a result many people visit the city centre on bike.

Existing provision of cycle parking includes a variety of hoop stands (pink), cycle parking against railings (blue), and paid for cycle parking (orange).



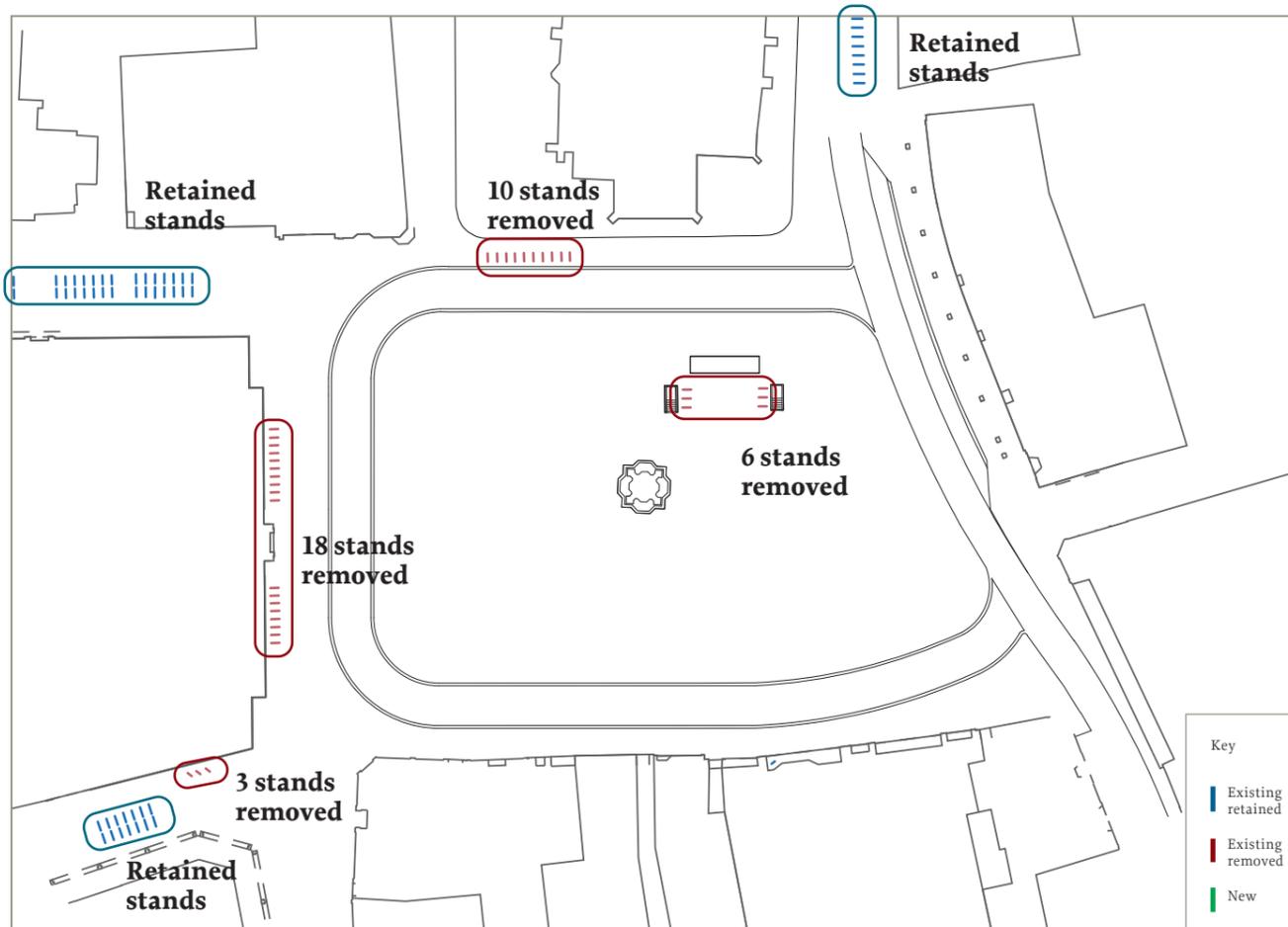
Existing cycle parking in front of Great St Mary's Church to be relocated off Market Square



Existing cycle parking provision on Peas Hill to be improved

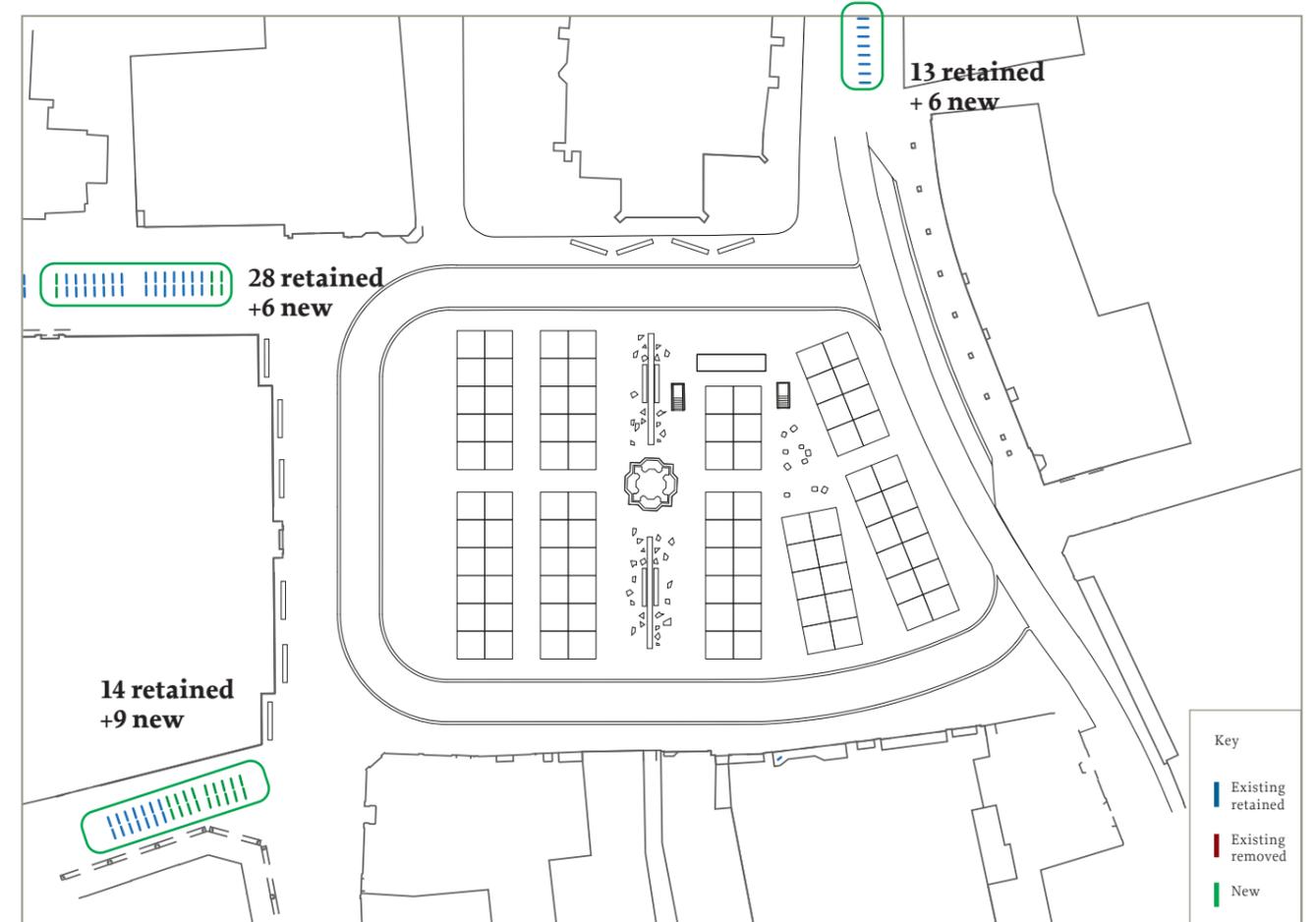


Problematic cycle parking on sidewalk



Existing cycle stands

A number of the racks being removed include the ones that sit directly in front of the Guildhall, also a those which are in front of Great St Mary's Church and some which are near to the entrances for the toilets.



Retained cycle stands and proposed cycle stands

The removed stand will be reprovided on the streets surrounding market square, including Peas Hill, St Mary's Street and Guildhall Street.

6.4 Pedestrian & Disabled Access

The Market Square can be an inaccessible space for people with disabilities. Despite being intended as a pedestrian environment there are particular difficulties in navigating the existing market, such as; uneven surfaces, high kerbs, obstacles, large and disjointed setts, slopes and slippery surfaces. As a result some users are unable to access the square safely or lack the confidence to use it.

Therefore, it is important to create an inclusive pedestrian environment that facilitates dignified and equal use by everyone in full compliance with the Equalities Act of 2010.

Proposed Accessibility:

The project aims to create an inclusive environment that recognises and accommodates the difference in the way people will use the Market Square. This will be done by creating a space that is simpler, with clear and distinct features that aid navigation for all users without discrimination in accordance with all aspects of the Equalities Act.

In order to make the square as accessible as possible there are a number of strategies proposed. As set out earlier in the report these include; reviewing the surface treatment of the existing granite setts with Historic England and technical experts, dropping the kerbs heights to 25mm with a 45 degree chamfer (without tactile paving) so they can be mounted more easily and creating a tonal contrast between the surfaces thereby enabling users to transition between the carriageway and strictly pedestrian areas. It must be noted that it was a conscious design decision to avoid the creation of a single shared space in the Market Square by leveling all areas into one continuous surface as there is enough evidence to suggest that such treatments may create unequal conditions in navigating the public realm. Instead, the intention is to preserve a distinction between carriageway and sidewalks while making the former more inviting to walk on establishing across the square the prioritisation of pedestrians over vehicles.



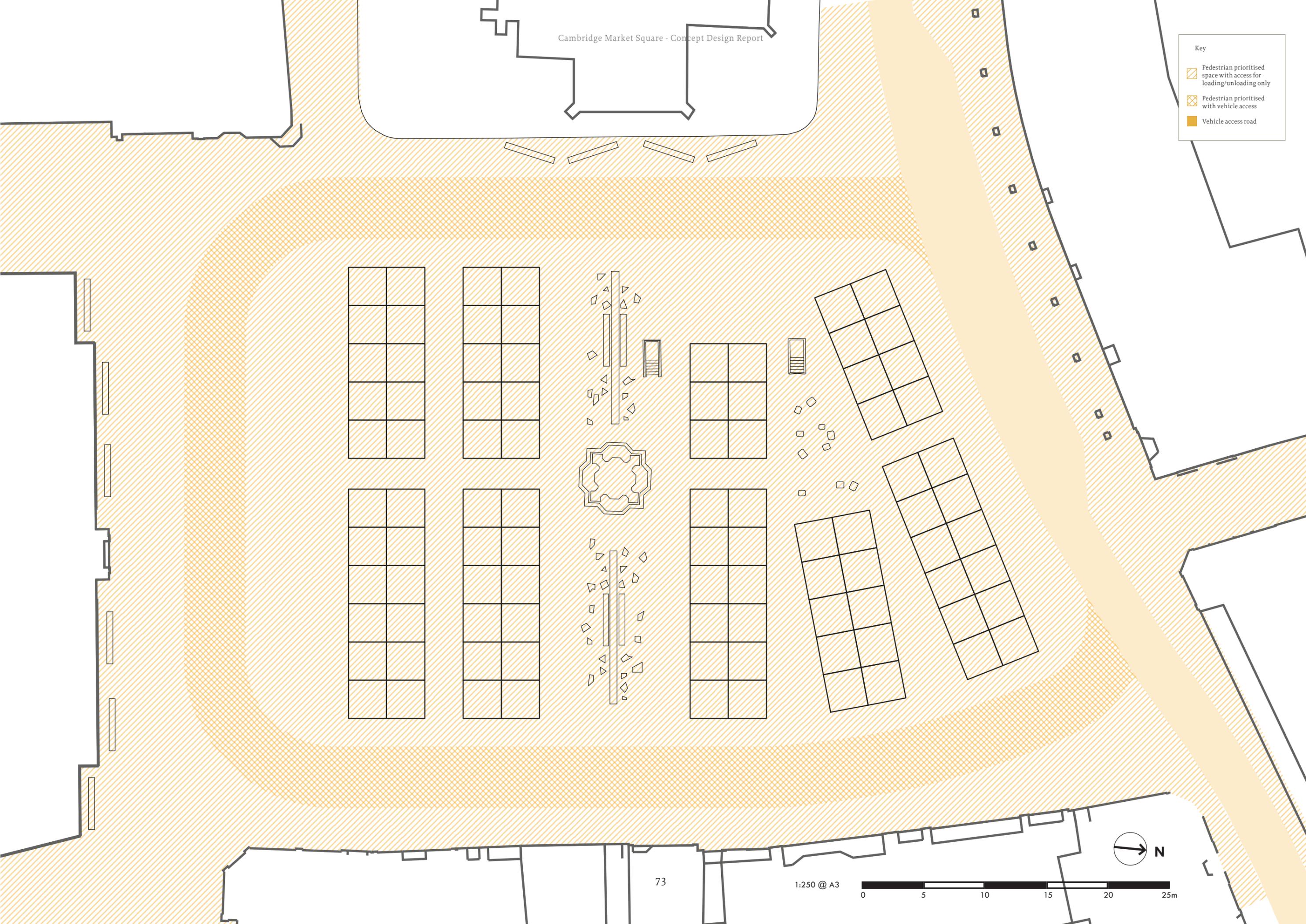
Examples of people using the carriageway as a pedestrian surface

Next Steps:

- * Further consultation with stakeholders who represent disability groups within Cambridge to understand their views of the design.

Key

-  Pedestrian prioritised space with access for loading/unloading only
-  Pedestrian prioritised with vehicle access
-  Vehicle access road



7.0 Utilities

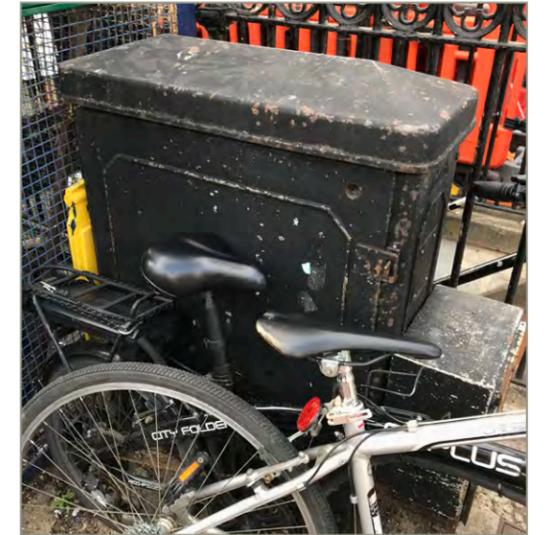
7.1 Electricity

Existing Electricity Supply

At present the market stalls are supplied with electricity by underground cables, which come above ground at untidy, inefficient sockets. Market traders have commented that the electricity is often unreliable with interruptions.

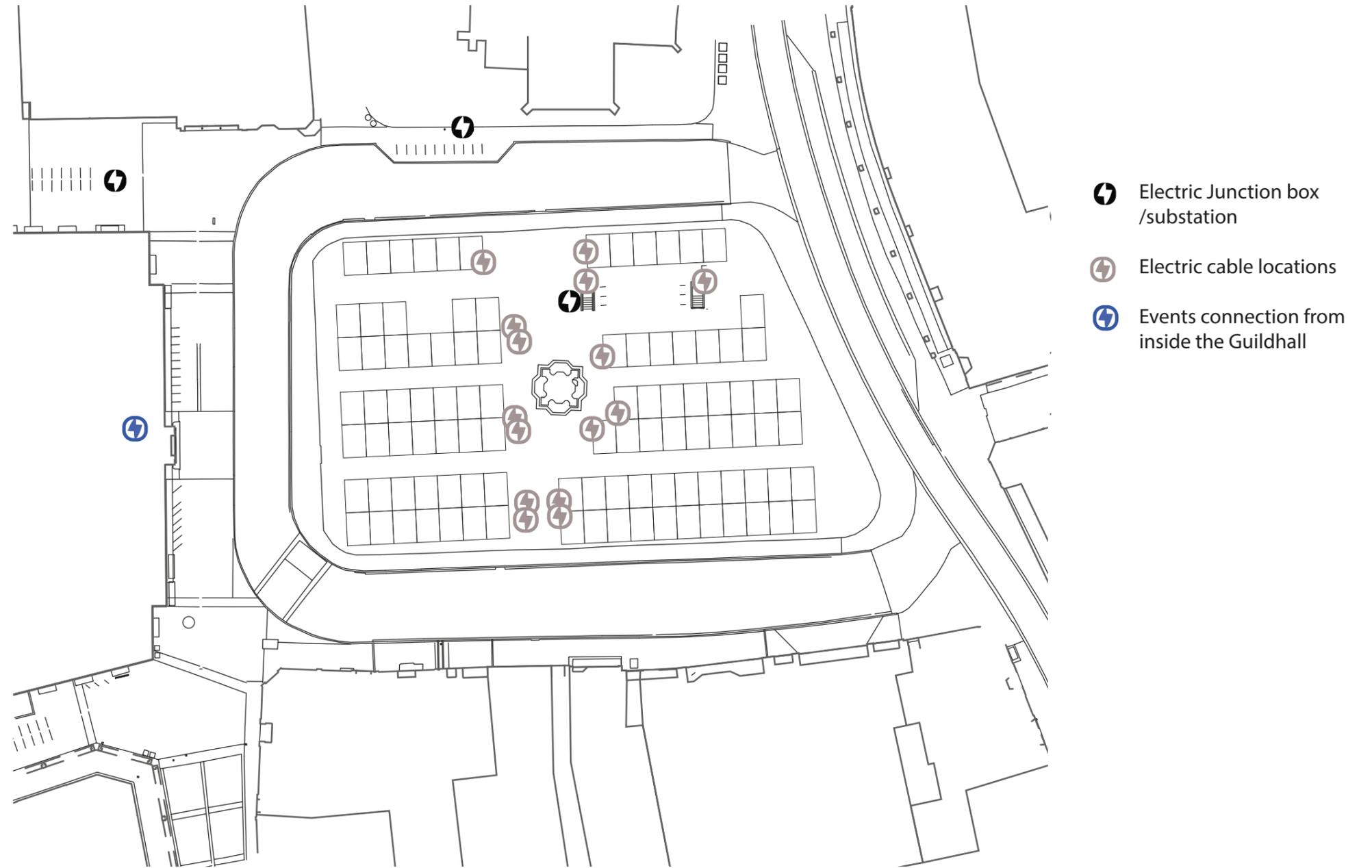
The existing fuse box adjacent to the stairs leading to the underground toilets, is in need of updating due to its undesirable and aged exterior cover and its underperforming capacity to service the market stalls power requirements resulting in frequent outages.

Power for events is currently only available from inside the Guildhall. This involves lengths of cables running from inside the Guildhall to where it is required.



Photos showing existing electricity supply to stalls.

Photos showing existing fuse box for market square.



Existing electricity supply



1:500 @ A3

Proposed Electricity Supply

A reconfigured electricity supply is proposed to distribute power to all market stalls and provide power in suitable locations for future events. The proposals include underground cable routes with restricted access points and a new fuse box located in a more functional and appropriate location in the reconfigured underground toilet space. This removes the need for above ground solutions and maintains flexibility to the space.

Market Stalls

Electrical cables are proposed to be run to the end of each row of stalls. New in ground sockets inlaid in the paving will provide connection points. Each line of stalls will then have a cable running from these sockets, along their roof lines to supply each stall.

The market stalls are proposed to each have their own in built cable with two 13A sockets at its ends. Each stalls cable can then be connected to it's adjacent stalls cable, like a 'daisy chain'. This will allow for each stall to be easily disassembled when needed and cables protected and tidy.



Weatherproof double socket daisy chain connectors

Events

Power supply for events or other uses is proposed to be provided by 5no. additional new socket connection points inlaid in the paving. These would allow events to happen without interference of the market stall power supply points. For larger events where market stalls are dismantled or relocated the market stall power points could also be used. Additional points would be located outside the Guildhall on either side of the entrance, within the central axis on either side of the existing fountain and one in the smaller space north of the fountain.

Toilet block

Power for lighting columns and underground toilets will be coordinated with further work.

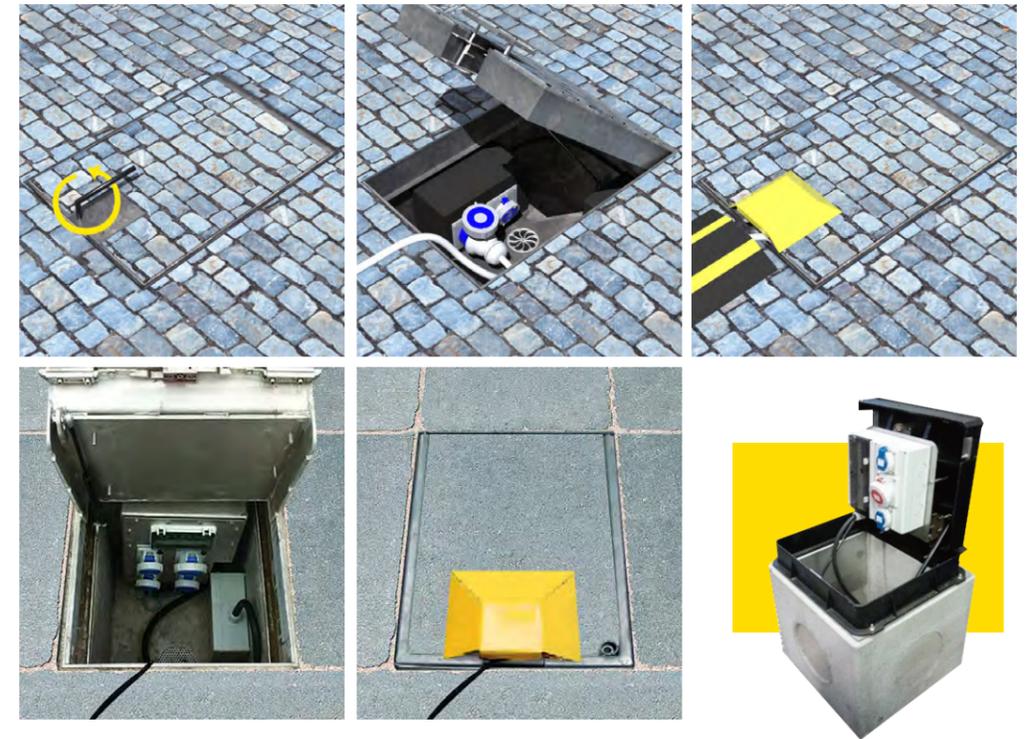
Renewable and smart energy

The integration of renewable energy technology with smart energy distribution is being considered.

In-Ground power points

The proposed in-ground power points can be specified in a range of sizes and connections to supply electricity, water, gas and telephone. This allows for services to be coordinated and minimise access points and the number of recessed covers.

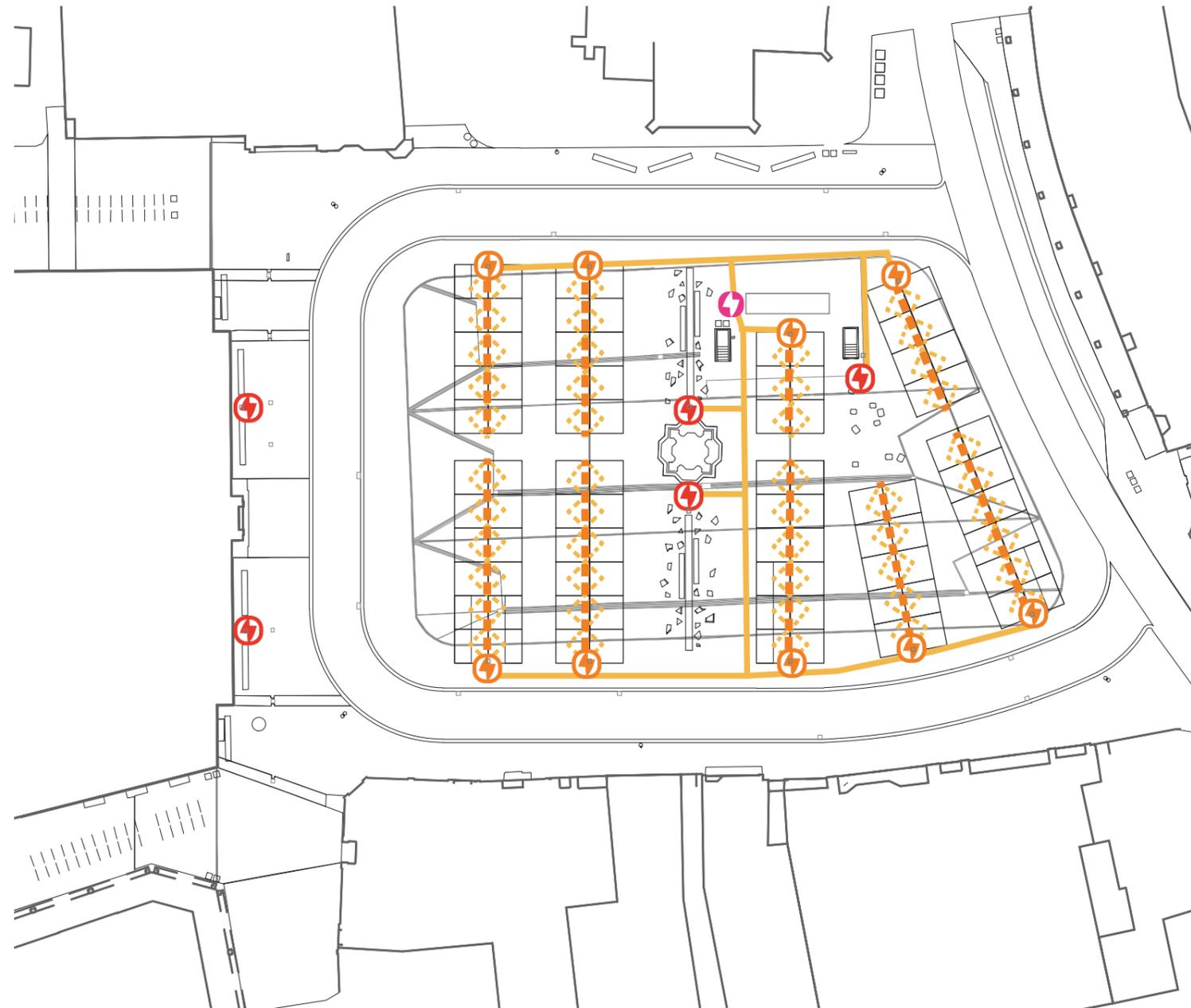
The flip lid units provide round the clock power for days, weeks or even months on end. To minimise the potential for damage owing to vandalism and harsh weather because they operate unattended with the lid locked down, with only the power cable protruding. The lids are raised manually and are gas strut assisted to reduce the risk of them failing compared to motorised pop up power points. The recessed covers allow them to integrate into the surrounding floorscape.



Proposed in-ground power supply points

Next Steps

- * Explore the requirement and technical feasibility of metering stall holders individually
- * Consult with the sustainability team to establish the potential for integration of renewable energy technology with smart energy distribution



- New fuse box location
- New stall socket locations
- New event socket locations
- Underground cables
- Modular stall cables above ground
- Non modular stall cables above ground

Proposed electricity supply



1:500 @ A3

7.2 Data

Existing Data

Provision of data in the market square is not adequate for one of the worlds most influential cities. As part of CambWifi there is free public Wifi in the Guildhall public building and the Market Place via The Cloud. The secure network is free and simple to join, allowing people to work flexibly, access public services, shop and pay bills online, and keep in touch with family and friends. The secure public access Wifi network is provided as part of Cambridgeshire County Council's Connecting Cambridgeshire digital connectivity programme, with Government funding, to support local communities. The free Wifi is understood to not be very usable and is not performing very well. There is also limited opportunities to sit down and use the Wifi due to limited seating.

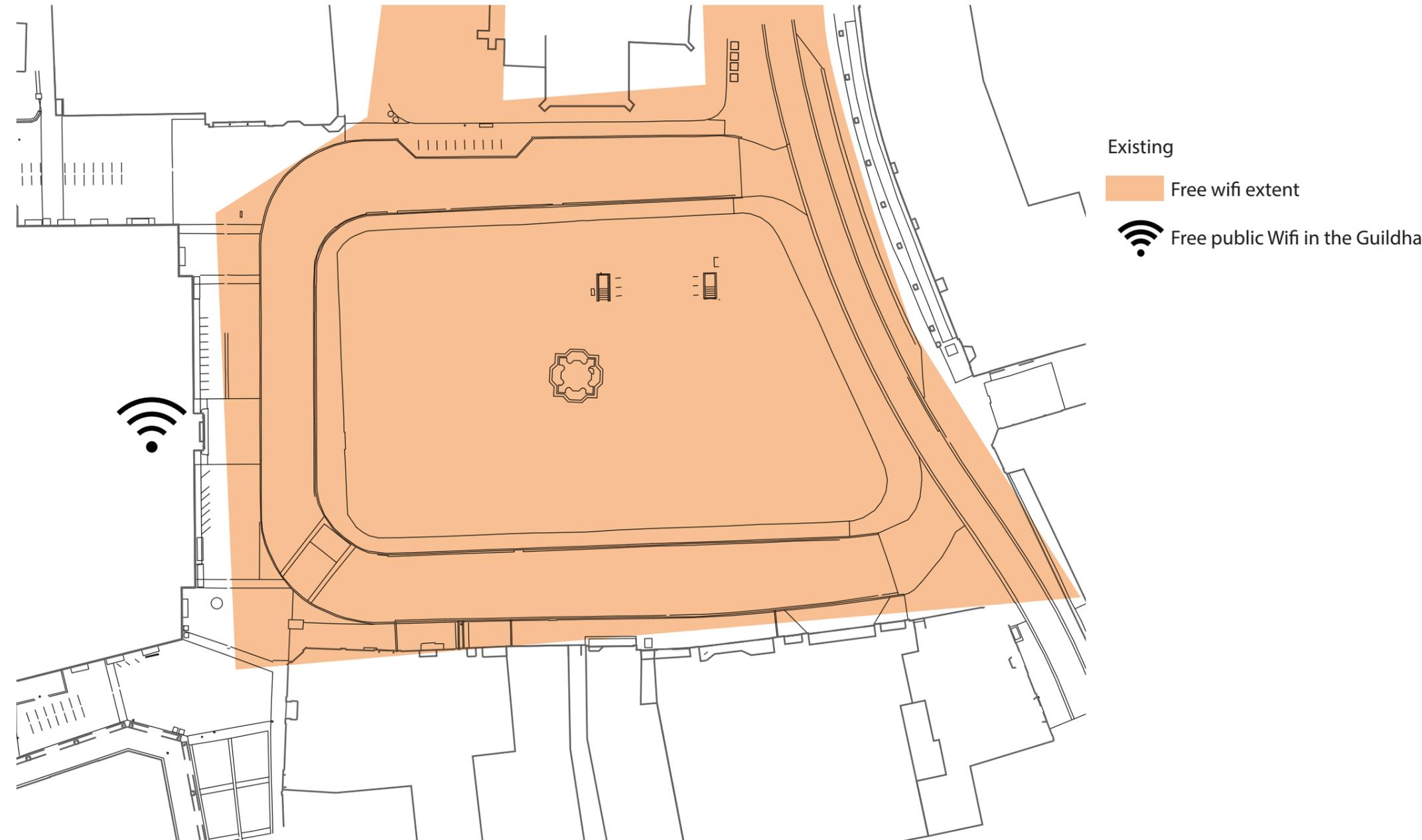
Proposed Data

Integrating data into the Market Square will help deliver a world class environment and solve some of the areas challenges. The proposals have been informed by conversations with Smart Cambridge who's aim is to ensure that Greater Cambridge is a 'smart city region' and Collusion, a not-for-profit company that's aim is to build an international profile for the wider Cambridge area as an R&D centre for interdisciplinary arts and technology collaboration. The proposals may be delivered in full as part of the project and some may be designed to future proof the scheme and initially provide only the connections or basic infrastructure needed but that enables future investment. This will create much more flexibility within the space by considering all possibilities at this stage.

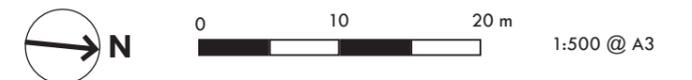
Better provision of wifi and 5G

Better access to 5G Data is inevitable for the future of modern cities globally. Providing improved free Wifi to its visitors in the centre of the city would enhance its attraction and functionality.

- * Upgraded Wifi connection to be installed to create a faster and more reliable connection.
- * New proposed posts for 5G or integration into new lighting columns or street furniture TBC.



Plan showing existing data



Internet of Things

IoT (The Internet of Things) could be installed in the market square. This is a smart network of physical permanent objects (i.e. lampposts or market stalls) with in-built sensors, software, and other technologies for exchanging data with other devices and systems over the internet. This infrastructure could be used to collect and analyse data and create a moving map of market traders which could be used to communicate who trades where on each day, this data could be linked to a dynamic/digital dashboard. Other uses include smart furniture that communicates environmental and social data or levels of congestion and pollution.

Projectors

The option to have a projector available within the space would create a very flexible method to create a changing environment and could create an ongoing revenue for the council. Requirements:

- * A fixed location on a structure within the square to fix a weatherproof box to house a projector to project onto the Guildhall. This could be integrated into the fixed stall option.
- * The windows in the Guildhall would require blinds
- * A media manager to look after it and a reliable and stable centralised management system that uses a basic platform but that can have interactive elements added. In other places engineers that maintain CCTV have been trained to maintain projection equipment.

Further advice on projection equipment may be available from The Cambridge Film Trust (CFT) a registered charity that fosters film culture and education for the benefit of the public in Cambridge.

Events data

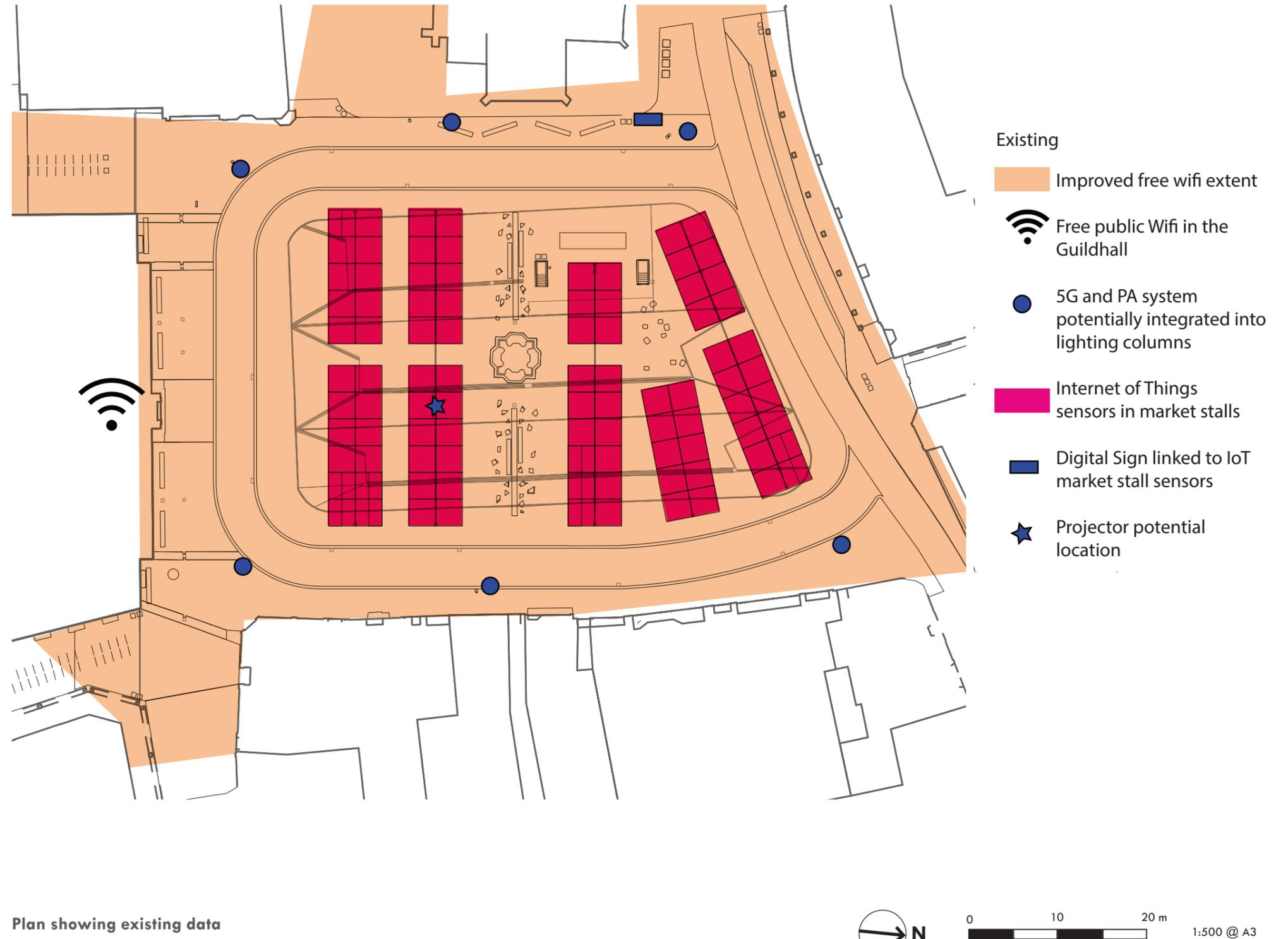
PA system, this could be on new posts or integrated into new lighting columns.

Externalising discussions from inside the Guildhall

There is the potential to bring discussions held within the inside of the Guildhall outside by using audio/projection, this would open up democracy and share the knowledge from what happens inside the Guildhall.

Next Steps

- * Phasing of proposals to be agreed
- * Proposals to be developed with appropriate consultants with coordination with electricity and data existing services.



7.3 Drainage

Existing Drainage

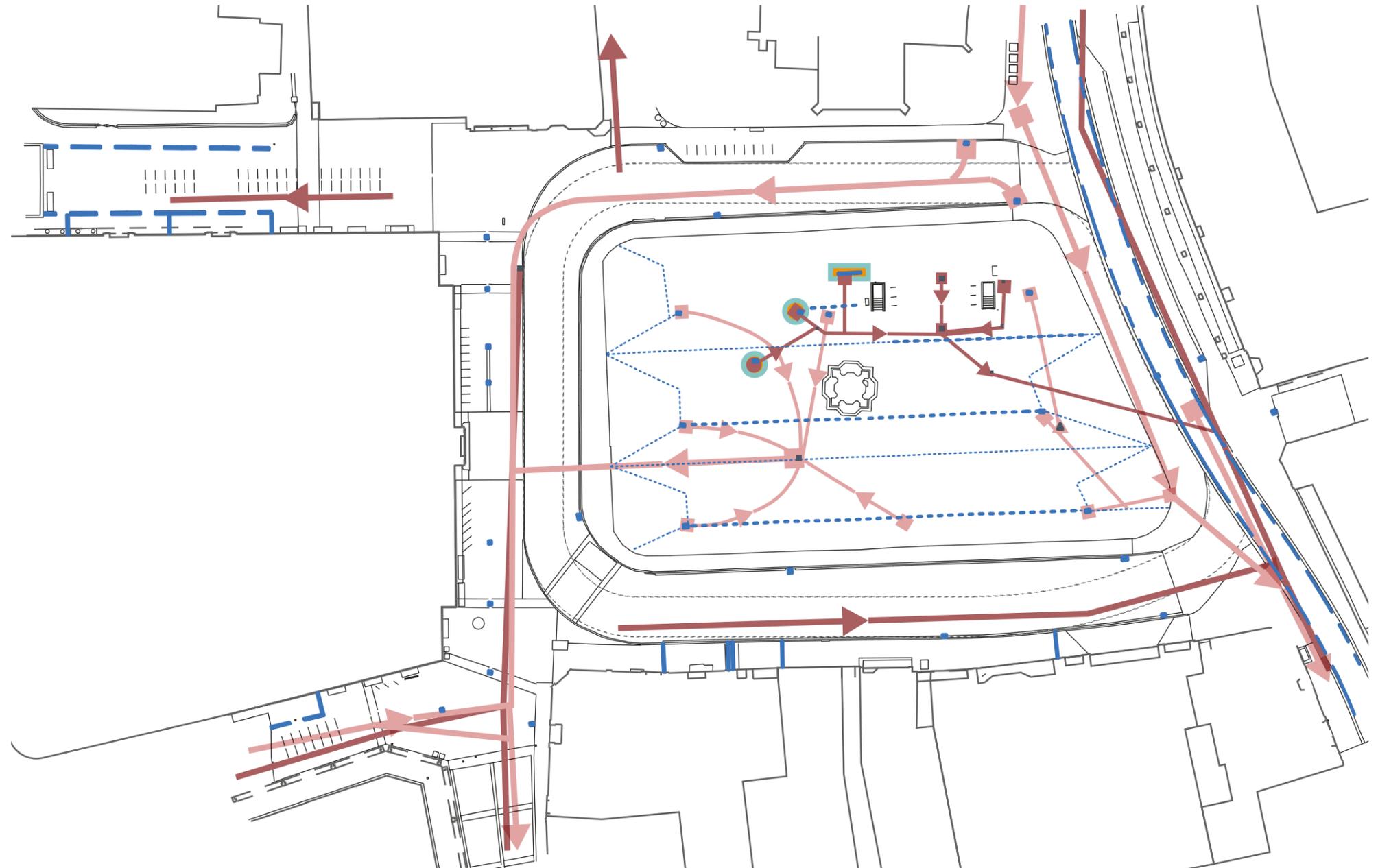
The existing underground drainage provision for surface water and foul sewer connects the Cambridge City Council services into the public services.

Existing underground drainage

-  Public surface water sewer
-  Cambridge City Council surface water
-  Public Foul Water Sewer
-  Cambridge City Council foul water

Existing above ground drainage

-  Fish mongers stall drain
-  Fat drain
-  Gulleys
-  Linear drainage features
-  Manholes for access to drainage system
-  Drainage channels (dished channels made from setts)
-  Drainage channels (linear lines of setts)



Existing drainage plan



1:500 @ A3

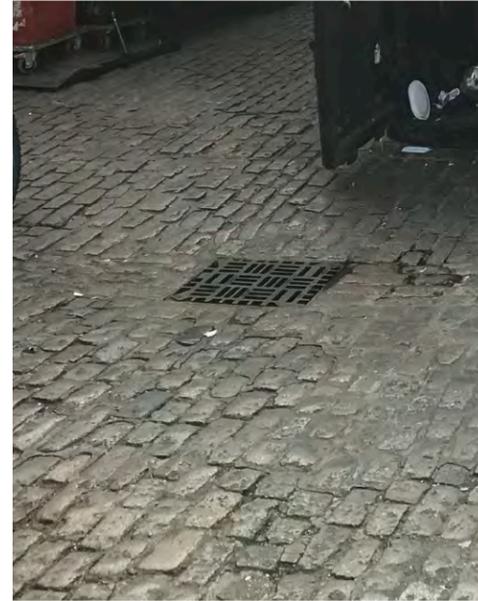
The central market area surfaced in historic setts uses dished drainage channels constructed from setts running north-south to drain into gulleys. The northern gulleys connect into the underground pipes and flow under St Mary Street and the southern gulleys flow towards the Guildhall.

There are two drains associated with the fishmongers stall, these connect into the foul sewer.

A fat drain located by the waste compacter also connects into the foul sewer. It is not clear if there is a fat trap which gets emptied regularly.

Both of these connect to the underground toilet foul connection before flowing north towards the public foul sewer under St Marys Street.

Road gullies and linear drainage features serve Market Hill and St Marys Street and connect into the public surface water pipes.



Existing rain gulleys



Photo showing existing drain used by fish monger for their waste

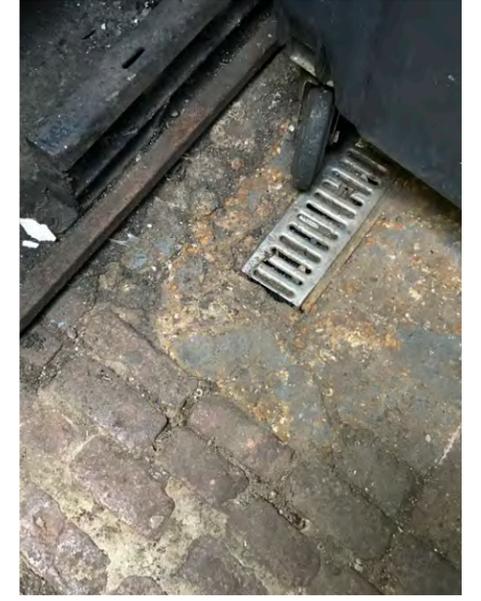
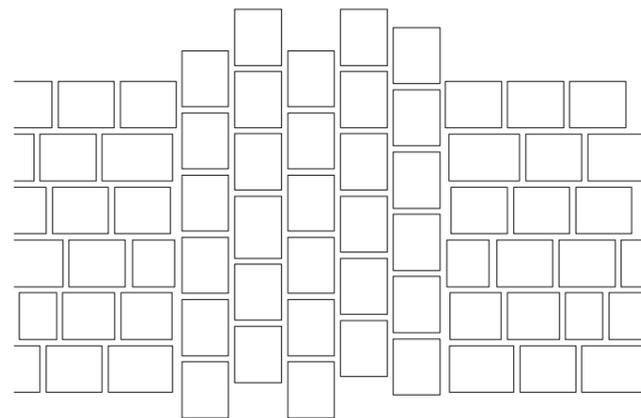


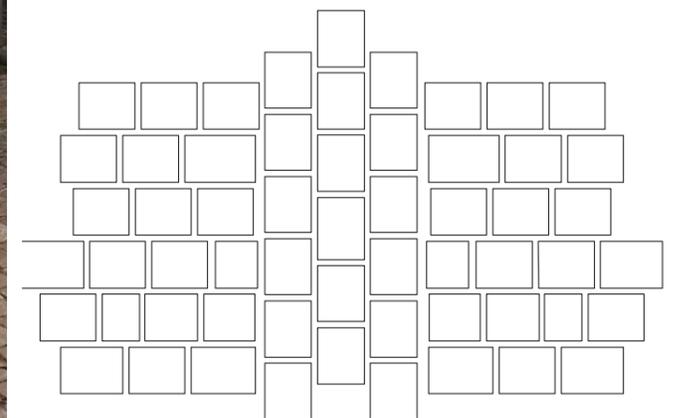
Photo showing existing fat drain



Dished row of 5 setts



Dished row of 3 setts



Proposed Drainage Adjustment

Surface run off

The existing linear drains will be retained along St Mary's Street as will the gullies in front of the Guildhall. Some modifications are proposed to road gullies on Market Hill to align with the new road alignment.

The drainage channel alignments within the historic setts will be retained and restored where they have been lost. Their drainage function will be maintained albeit reduced as part of the proposed additional drainage to ensure accessibility requirements at met. This would involve the channel depth being modified to reduce the depth. New linear slot drains would then run east-west to connect into the existing drainage channels.

Toilet block

The existing toilet block will be configured whilst reusing the existing drainage connections.

Event toilets

An events foul drainage connection is proposed. This would allow extra toilets to be brought in for events that can be connected to the existing drainage system. This would allow for a more sustainable event infrastructure allowing non-plastic and chemical temporary toilets to be used.

Fishmongers

A relocated foul connection drain to service the fish mongers stall is proposed.

Fat drain

The existing fat drain is proposed to be relocated to the north of the underground toilet block reusing an existing foul connection.

Next Steps

All connections and underground pipe work to existing drainage to be confirmed by drainage engineer in coordination with the CCTV assessment.



Slot channel maintenance access



Slot channel with perpendicular rather than linear divides to avoid debris getting stuck



Coordinated proposed gullies



Slot drains connected to drainage channels



Events toilet foul drain connection