Cambridge Civic Quarter
RIBA Stage 2 Concept Design Report
Executive Summary

November 2024

CCQ-CPA-ZZ-ZZ-RP-A-9001
Revision: P3.0



CAMBRIDGE CITY COUNCIL

CARTWRIGHT PICKARD

Executive Summary
Guildhall

The Guildhall

The proposals below show a combination of the Council offices, Civic Functions and a serviced office, let on a Management Agreement basis. This option gives the Council a good degree of flexibility allowing for future adaptations.

To operate efficiently and allow the Council to deliver services effectively, we are proposing a transformed workspace to maximise flexibility and accommodate agile and hybrid working styles that are the bedrock of modern collaborative working methods.

The building will be upgraded to accommodate modern requirements for refuse and recycling storage, internal cycle storage, changing and shower facilities, modern WC provision, accessible lifts to make the building fully inclusive, fabric improvements to improve thermal comfort and dramatically reduce energy consumption.

Inclusivity is key to the proposals. The provision of several accessible entrances, new and improved lifts and the provision of Changing Places, Prayers Room and Breast Feeding room, will open the Guildhall to all the residents of Cambridge.

The design consortium believes that ,subject to completion of the RIBA Stage 3 design, the Guildhall's energy use can be reduced by 68%, and that the Council's aspiration of Net Zero carbon in operation, is achievable without carbon offsetting. Please refer to the summary page on Sustainability at the end of this document.

Key spaces requested

- Flexible meeting spaces
- Staff only 1:1 meeting spaces
- Staff only larger meeting spaces
- Breakout space
- Cycle storage
- Staff WCs
- Staff showers
- Staff changing rooms
- Flexible office space



The 'Heart Space'
A publicly accessible vibrant centre of the Guildhall offering a cafe bar and soft seating

Meeting Rooms

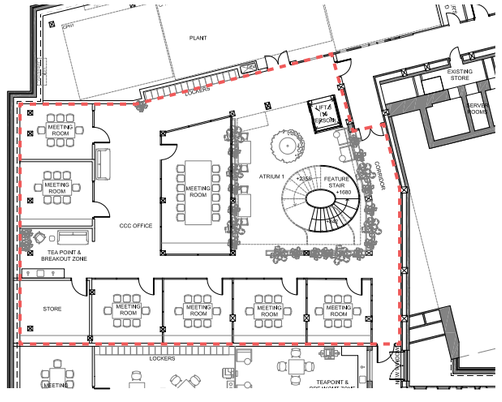
Currently Mandela House provides 12no. meeting spaces.

Proposals

Meetings rooms are spread across the Council floor space with a range of sizes provided. At basement level a large meeting room is proposed plus 6 individual smaller rooms.

Existing heritage spaces, such as the Committee rooms, are proposed to be used with greater flexibility and offer high quality meeting spaces, this provides 4no. spaces at Level 1.

A range of additional informal spaces are also provided close to work settings and the 'Heart' space can be used for informal conversations. We are confident that these proposals will meet the needs of the Council.



Basement meeting room suite

Executive Summary
Guildhall

Council Office

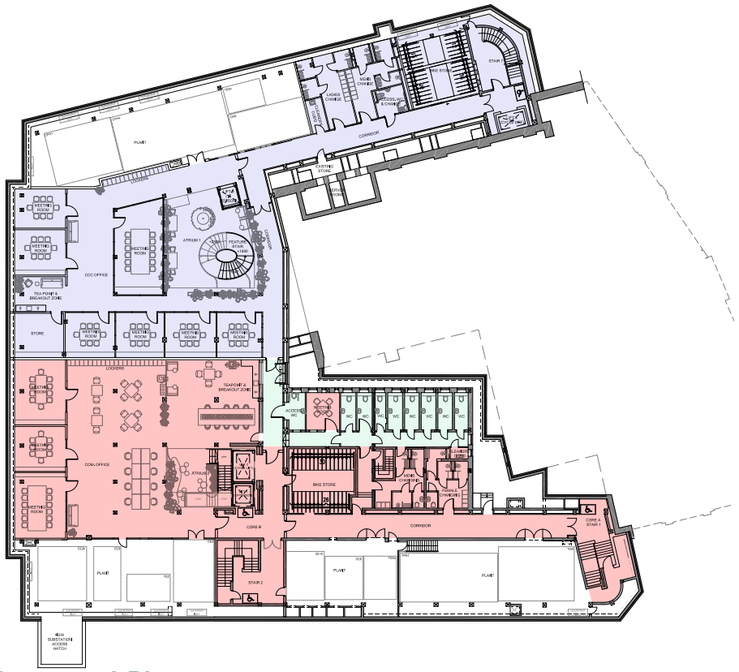
Customer Service Centre

Commercial Office - Management Agreement

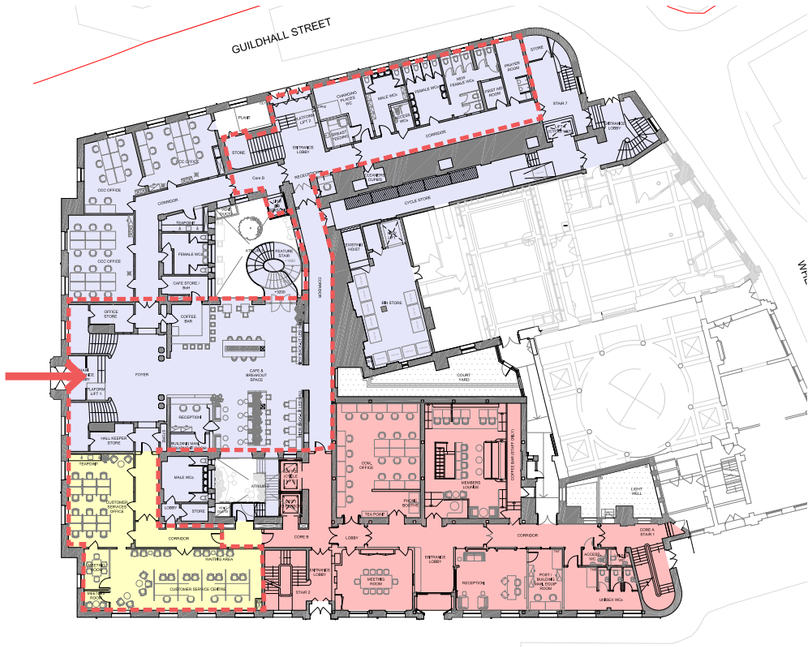
Civic Spaces - Publicly accessible

Publicly accessible space

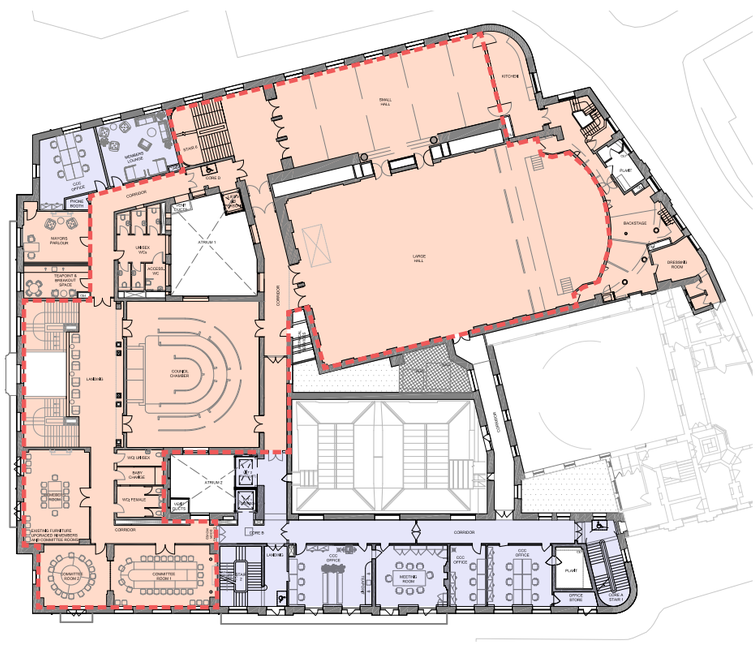
Shared WCs



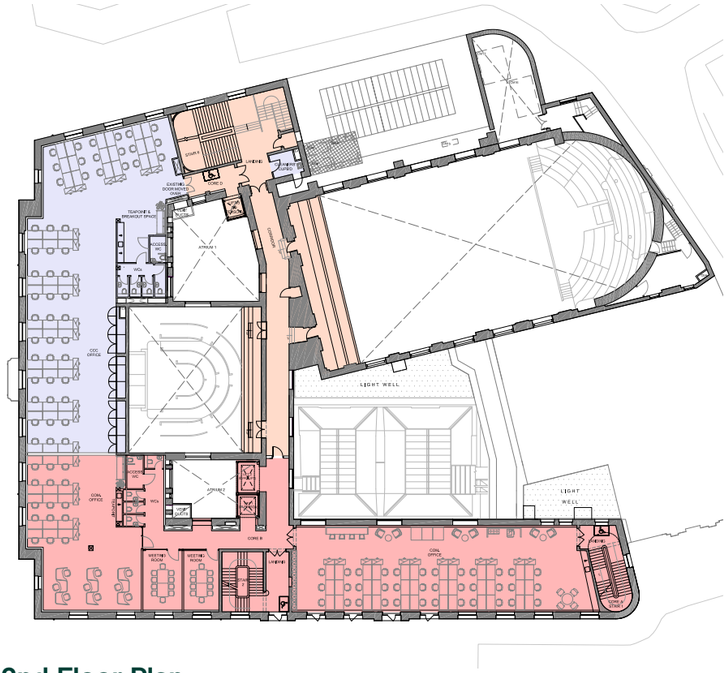
Basement Plan



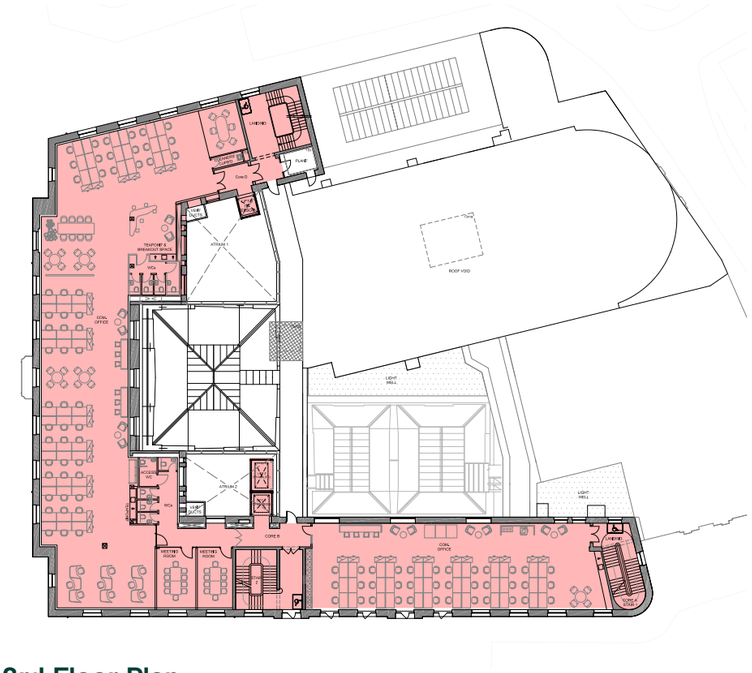
Ground Floor Plan



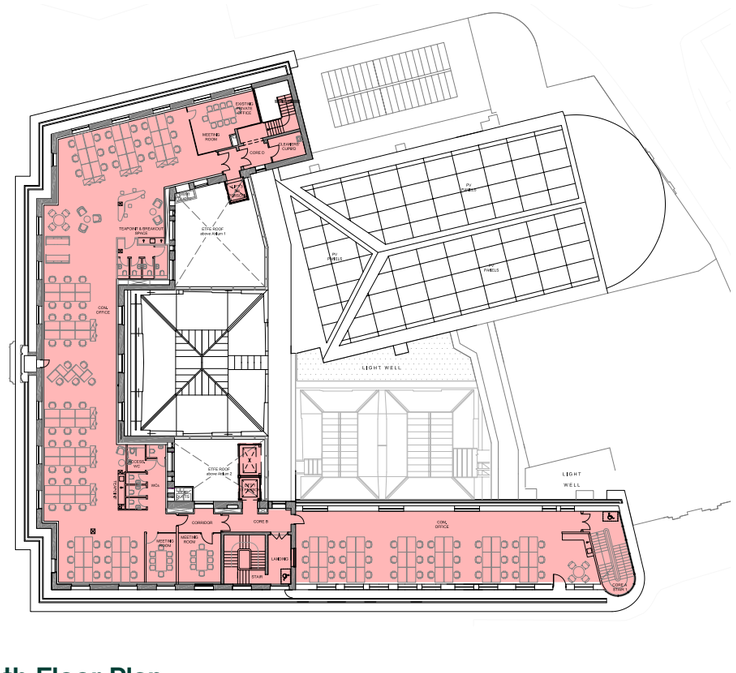
1st Floor Plan



2nd Floor Plan



3rd Floor Plan



4th Floor Plan

Executive Summary
Guildhall



Office WCs

Currently the Guildhall has a total of 39 WCs.

The proposals include 72 WCs, bringing the Guildhall inline with modern requirements.

Gender neutral 'Super Loos' are provided within the office and basement to make the most efficient use of available space.

Changing Places

A Changing Places facility has been located within the Guildhall Street wing at Ground floor.

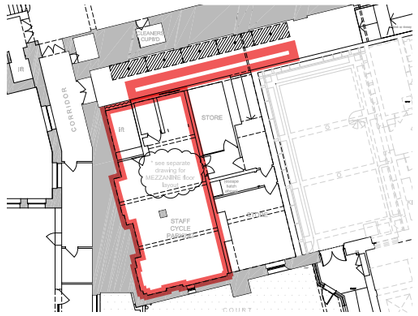
Large and Small Halls

Additional WC's have been provided in order to reduce queuing at intervals of larger events.

Provision for Cycles

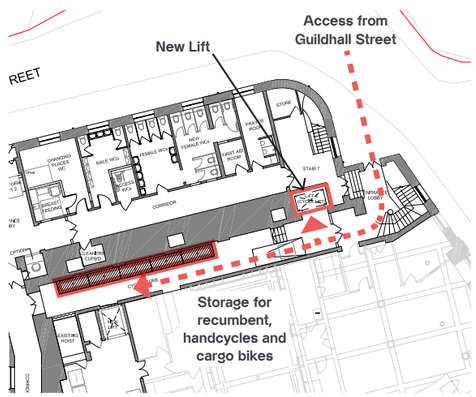
Current cycle storage provision in the Guildhall is very poor. Primarily located within a corridor and space below the Large Hall.



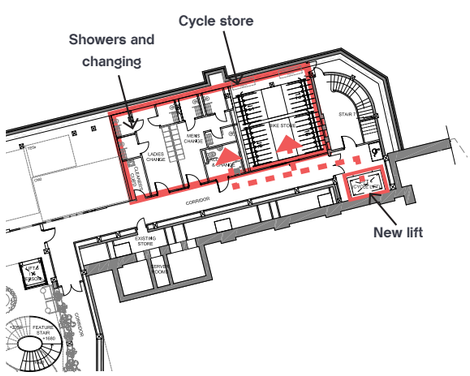


Proposals for Cycles

Space for 112 bikes is provided. This would allow approximately 24% of the workforce to cycle to work - far exceeding BREEAM requirements and exceeding Cambridge City Council Cycle Requirements.



Ground floor



Basement level

Museum of Cambridge or other Cultural Attraction

The sketch shows a potential route to The Museum of Cambridge or another Cultural Attraction.

The plan shows the area allocated to this use (red dashed line with green fill), which is circa 500sqm. Access at ground floor level would be provided via the 'Heart' space and facilities such as toilets and cafe would be shared.



Executive Summary
Corn Exchange

The Corn Exchange is a much-loved institution providing valuable cultural and entertainment events which make an important contribution to enriching the cultural life of the city. Like the Guildhall, the Corn Exchange is an intrinsically well-built building with high architectural and historical merit. However, it also no longer meets modern standards expected today. Through stakeholder engagement with the Council's operational staff, the shortcomings of the existing building have become clear. Its potential revenue generation is limited by fire regulations, poor movement and circulation of the audience prior to performances during performance breaks. As a result, food and drink sales are lower than expected for a performance venue of the scale.

The Internal design changes proposed will help to transform food and drink sales by improving internal circulation and movement by introducing a second entrance and addressing the audience congestion at the main entrance in front of the current bar area. WC provision is approximately half what it should be, so this is addressed by the proposals. Parsons Court is currently used for on-street refuse bin storage, which blights the experience of the Corn Exchange for the audience. The proposals transform Parsons Court into an attractive, welcoming and, pedestrianised breakout space without refuse bins. The proposals include the complete renewal of all building services, additional lifts to make the building fully accessible, expanded back of house facilities and green rooms, which will transform the variety and diversity of events and performances that can be held in the building. New plug-and-play AV systems will allow a quicker turnaround of events, which will allow more daytime use for conferences, which is currently underutilised. This could be a valuable source of additional revenue.

New mechanical ventilation systems are proposed to improve the experience for audiences during performances. Improvements to the fabric of the building are also proposed that will dramatically reduce energy consumption and maintenance costs. Solar PV panels are proposed on both sides of the large roof which will help generate significant renewable energy.

Fire Capacity Increase

Current Fire Capacity: 1550*

*limited by Fire Brigade

Max. Fire Capacity: 2090*

*Fire exit capacity can accommodate this number of occupants.

Improved Food & Beverage Offer

2 Current

Bar snacks available, St. John's bar currently under utilised

4 Proposed

Improved food and drink offer proposed

Improved Sustainability

Gas fired inefficient heating system

Limited Insulation

All electric ASHP heating system

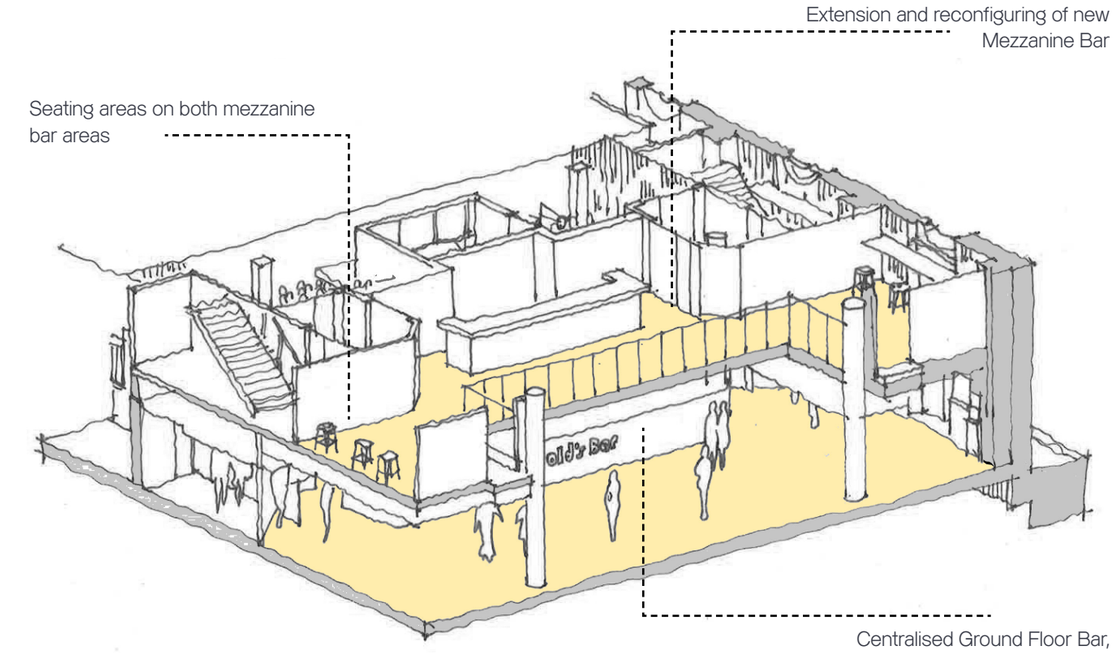
Highly insulated roof

PV panels generating electricity

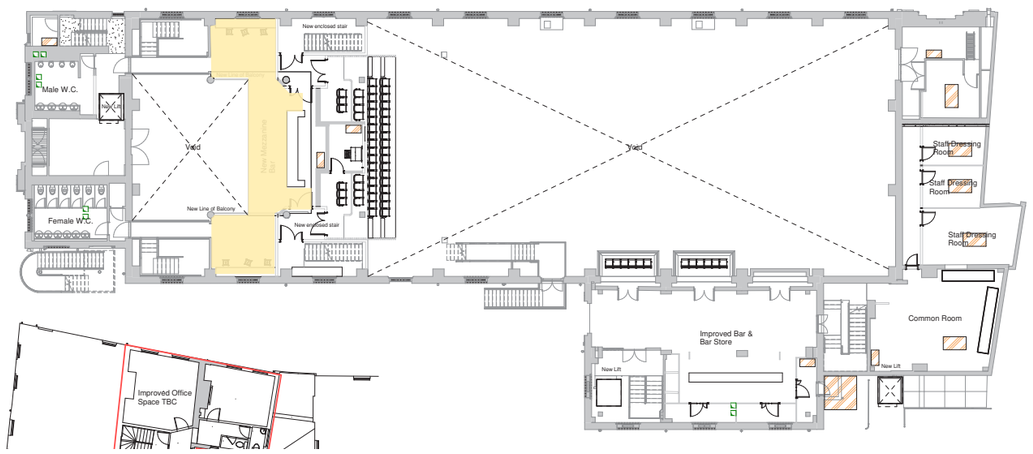
Potential 65% reduction in energy use

Executive Summary
Corn Exchange

New ground floor and mezzanine level bars will dramatically transform this underutilised and inefficient space within the Corn Exchange, increasing visitor numbers, along with boosting bar and ticket sales.



Proposed ground and mezzanine level bars providing food and beverages



Proposed ground and mezzanine level bars providing food and beverages



Upgraded Ground Floor Bar Area

Transformation of the space

The configuration of the current Corn Exchange ground floor and mezzanine zones, knocking through the current blockwork walls, will reveal the beautiful, listed brickwork behind. It will create a much more spacious and open feel to transform the arrival experience for visitors to the Corn Exchange. The underutilised space of the mezzanine level will be transformed, creating a new destination for customers to enjoy the space and performance.

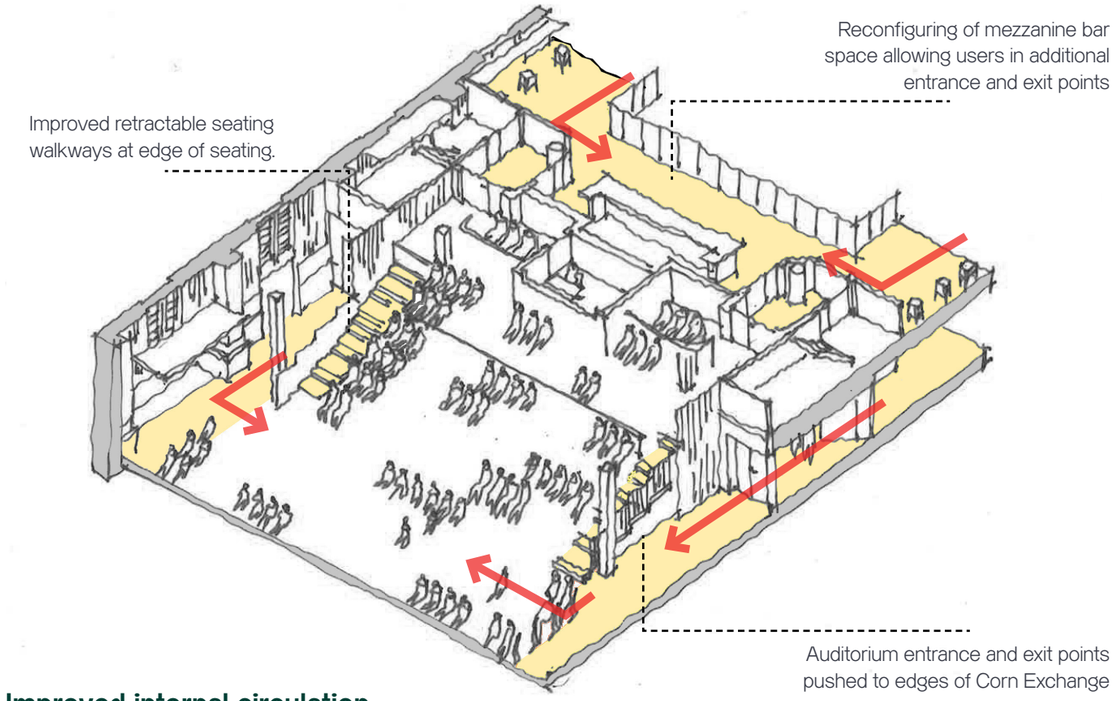
W.C. Calculations

The Corn Exchange currently has WCs which require updating and improving facilities for those less able/ wheelchar users. Only 1 accessible WC is currently provided.

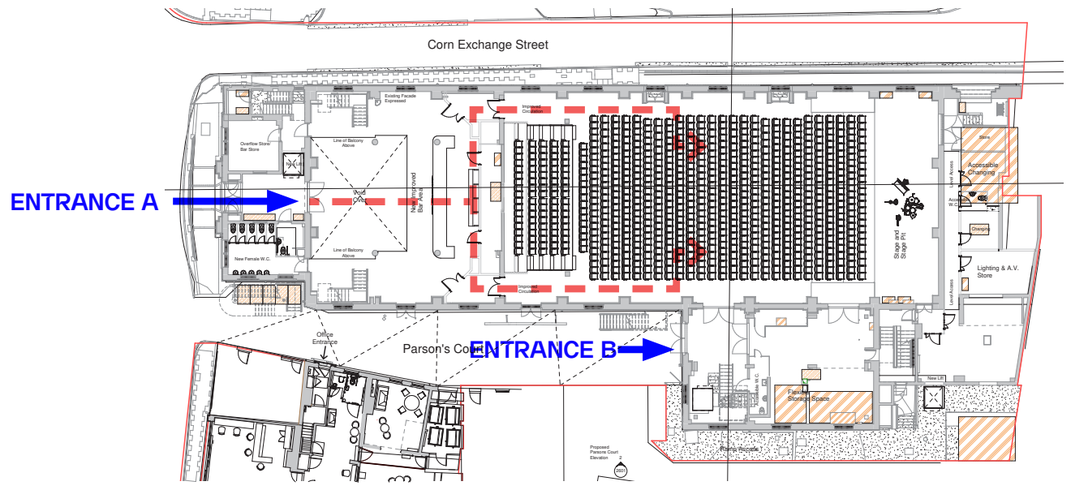
To improve the access to WCs the proposals show 40 WCs and 4no. of these are accessible. The same overall provision as existing will be provided.

Executive Summary
Corn Exchange

Re-arranged seating configuration allows for improved circulation through the Corn Exchange, with disabled access to Mezzanine Bar. Additional Entrance B, in Parsons Court to reduce amount of people moving through main building.



Improved internal circulation



Ground floor circulation



A reimagined Parsons Court creating a vibrant place for Corn Exchange visitors to use

Executive Summary
Market Square and Public Realm

Market Square and Public Realm

The Market Square has been in existence in some form possibly for more than 1000 years. It has clearly gone through many changes in that time, resulting in the space we see today.

The design consortium has carried out extensive stakeholder engagement and consultation, in particular with market traders, adjacent University colleges, members of the public and the council officers responsible for planning, conservation and transport.

When compared with some of the beautiful and vibrant market squares in other European cities, this Market Square falls a long way short of being an attractive and inclusive destination and a place that people will want to visit. To secure the long-term future of the market a significant refurbishment and visionary transformation is required.

The extensive consultation carried out has uncovered many deep-rooted problems with the existing Market Square and the wider public realm that surrounds the Guildhall and Corn Exchange. These problems include: antisocial behaviour, uncontrolled vehicular movement, lack of seating, excessive on street cycle storage, unsightly on street refuse bins, broken and uneven paving, the listed granite sets to the market square itself are very uneven, in a poor state of repair, when wet create slip hazards making the market square inaccessible for many. There is a lack of external lighting, limited biodiversity and a lack of trees provides limited shade in summer.

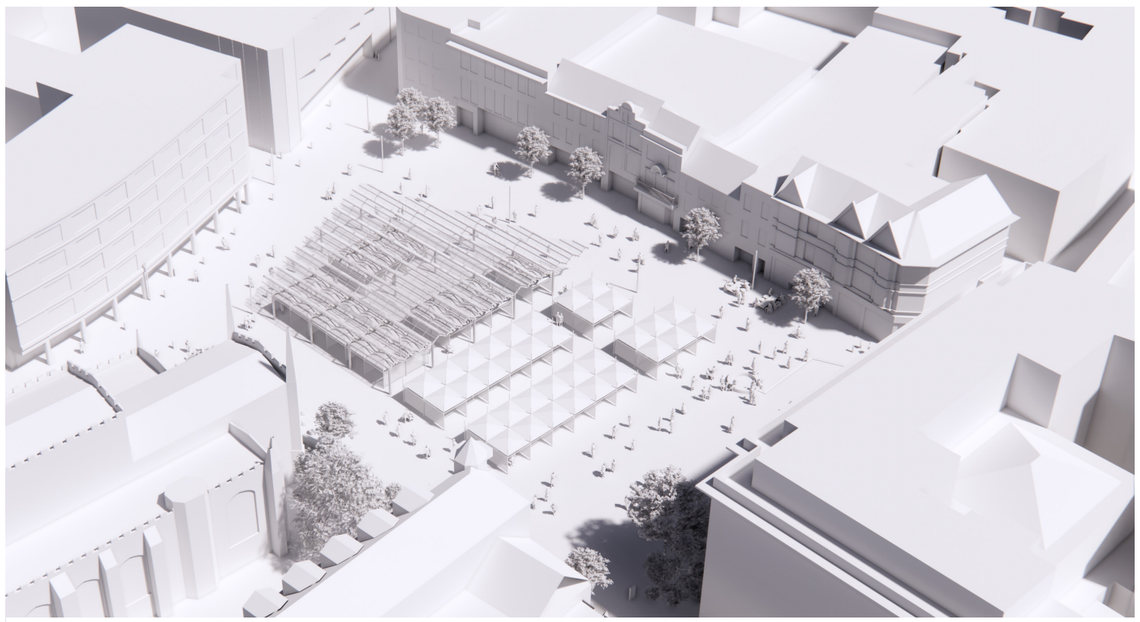
The Council's brief looks for visionary proposals to create a flexible civic space in front of the Guildhall, that will allow a variety of curated cultural and community events to take place throughout the year. These proposals show how this could be done whilst allowing permanent market stalls to be retained and an increase in the number of market stalls to be implemented during peak shopping periods such as weekends.

The proposals include a lightweight permanent canopy in the square, which could address many of the issues set out above. The form of the canopy is only a concept with the detailed design to be resolved at the next design stage following more stakeholder consultation particularly with the Market Traders. At the heart of these proposals is "putting people first". The proposed restriction on vehicle movement around the Guildhall and the Market Square is designed to give pedestrian priority and make this area of public realm safer and more inclusive.

The proposals will help regenerate this part of the city whilst binding the Civic Quarter together. If delivered, it will shape some beautiful spaces for people, connect commercial, civic and University life and create new public space and a market experience that will compare well with the best examples across Europe and that befits this wonderful world class city.



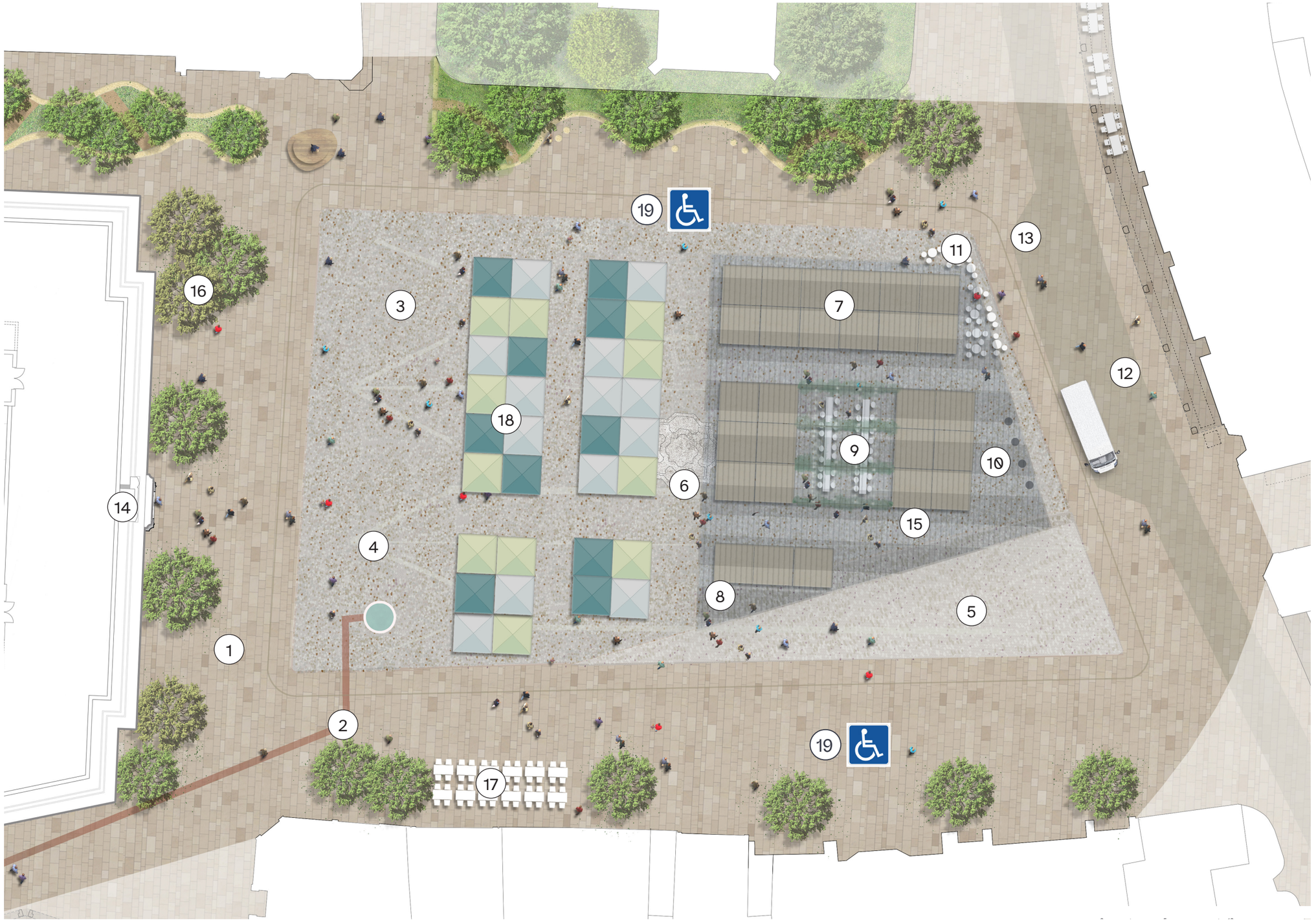
View looking East along St Mary's Street towards the Market Square and new canopy



Massing model showing proposals

Executive Summary

Market Square and Public Realm

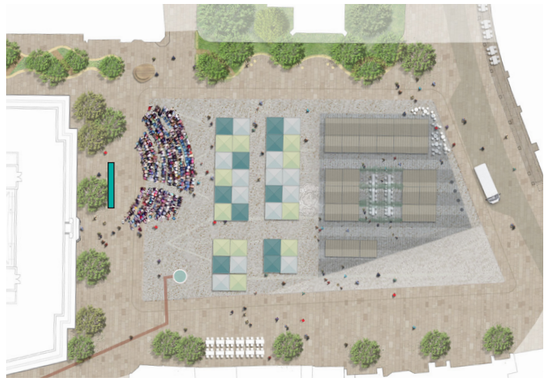


1. Yorkstone Paving
2. Hobsons Conduit
3. Historic Setts
4. Patterns in the setts
5. New granite setts
6. Fountain base
7. Permanent Market Stalls
8. Indicative canopy design
9. Covered Dining Area
10. Underground bins
11. Outdoor cafe seating (e.g. Shelley & Sarah's)
12. Carriageway position
13. Vehicular pull-in point
14. Principal entrance to The Guildhall
15. Route between Market Stalls
16. Street trees
17. Pavement dining
18. Demountable stalls
19. Blue Badge parking (Indicative zones) - no reduction to current provision. Blue Badge holders with a City Centre disabled access permit from the Council can access the Market Square and park for up to three hours.

Executive Summary
Market Square and Public Realm

A flexible Market Square

A flexible space is proposed and below are examples of how a large market can operate and other events take place around it.



Example cinema layout

24ft/7.32m screen

5m offset/access between screen and audience

Back of house area behind screen

Capacity of audience seated

230m2 of space at 0.6m2 per person (0.5m2 pp plus circulation) = approx. 385 people



Market Stall Precedents

Further engagement with market traders to be undertaken at the next stage



Permanent market stalls under Spitalfields Canopy



3x3m demountable market stalls in Peterborough

Market Stalls

The existing stalls are out-dated, unattractive and do not meet the high-level of design ambition for the Market. They are also smaller than most modern market stalls, and therefore encourage multiple stalls being rented out by individual traders.

Proposed stalls

Typical market stalls across the UK are now 3m x 3m as a standard size. Our proposal is for demountable stalls to be of this standard style, either weighted or locked into ground fixings set within the setts.

Permanent Stalls

27 underneath the canopy

Demountable Stalls

18 along Market Hill Connection

Up to 46 within Market Square

Total demountable = 64

TOTAL MAXIMUM NUMBER OF STALLS = 91

This produces no loss of market stall area compared to current offer

Sustainability

Approach to Net Zero

Defining the brief

Delivering a Net Zero Carbon Civic Quarter is a key aspiration of the Council's brief.

At the outset of the project there was no industry agreed definition of what 'Net Zero Carbon' means. There were many definitions and we therefore undertook early engagement with the Council's Principal Sustainability Officer, at Greater Cambridge Shared Planning Service, to establish an agreed approach for the project.

The application of EnerPHit principles was agreed as the most appropriate approach to the Civic Quarter.

To achieve the Net Zero Carbon aim operational energy demand must be reduced significantly. Energy Use Intensity (EUI) targets are established in the UK and we propose aligning with these.

Renewable energy sources should be maximised to supply energy to the Guildhall, Corn Exchange, and Market Square.

Reducing operational energy demand will require optimised thermal insulation levels, reduced thermal bridges, improved air-tightness, the use of ventilation system with the most efficient heat recovery, and efficient heat generation. The EnerPHit approach stipulates performance targets for these interventions and provides a calculation methodology, governance during design and on site for achieving them.

At the end of RIBA Stage 2 the Pilot Version of the UK Net Zero Carbon Buildings Standard was published. This has helped show that the EnerPHit approach is indeed correct as the Guildhall has been shown to be Net Zero Carbon in operation.

Summary of approach

Working with Max Fordham we have established an approach to fabric upgrades. This is primarily influenced by the heritage significance of the different spaces within the buildings.

The fabric upgrades aim to achieve two main objectives;

- Improved airtightness
- Increased thermal insulation (lower U-value)

Care needs be taken to manage moisture within the historic fabric and detailed moisture modelling will be required at the next stage. There are different ways to manage this and these are presented in more detail by Max Fordham.

Guildhall

Most of the upgrades to walls are proposed internally but we have also highlighted areas where external works could be possible.

Flat roofs will be upgraded externally, whereas pitched roofs will likely be insulated between rafters.

Due to the heritage value and quality of the original window frames these will be retained and secondary glazing introduced internally.

Rooflight glazing, currently all single glazed, will require replacement with a high performance, triple glazed thermally broken system.

Corn Exchange

The same principles are applied but focus at the Corn Exchange is on thermal and airtightness improvals to the roof and secondary glazing. The large roof provides a great opportunity for significant areas of PV panels.

Market Square

The Market Square indicative canopy will provide an opportunity for PV panel and will be designed using recycled steel to reduce embodied carbon.

Water Usage

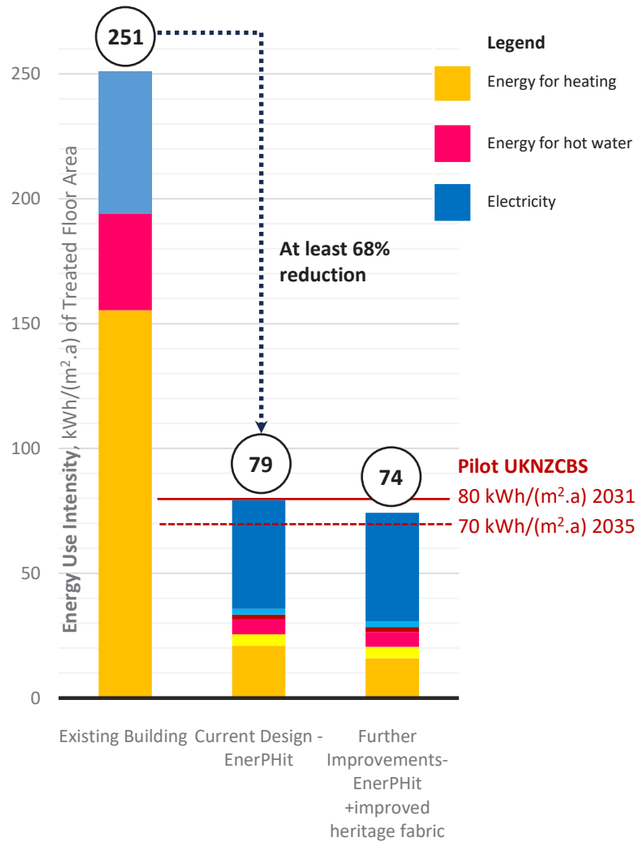
Through the use of modern fittings and collecting both grey and rainwater, water usage across the Civic Quarter will be significantly reduced.

Biodiversity

The proposals include significant new planting and this will improve biodiversity on site.

EnerPHit – High Level Guildhall Outcomes

Through the application of EnerPHit principles it has been shown that it should be possible to reduce the energy consumption of the Guildhall by approximately 68%. Based on the definition contained within the, very recently published, Pilot UK Net Zero Carbon Building Standard, the Guildhall would be defined as a Net Zero Carbon (in operation) building without the need for any Carbon offsetting. Please refer to the Max Fordham Stage 2 Report in Appendix 5 for full details.



Corn Exchange Challenges

The Corn Exchange presents a larger set of challenges than the Guildhall due to the decorative features present on the external walls.

The brickwork walls, forming the external envelope, have decorative features internally and externally. They are constructed from solid masonry. These factors remove our ability to insulate this part of the building.

Our focus is therefore on the roof and the MEP systems. Insulating the roof and making the construction airtight will reduce energy use. Installing modern MEP systems will improve the internal environment and reduce energy use.

Coupling these improvement together we expect up to a 65% reduction in energy use is possible.

Additional Considerations

Future proofing and connection to district heat network should be examined but feasibility should be assessed, and the building could be exempt if proven not beneficial for energy efficiency.

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