

Guildhall Future Use



Executive Summary

The project vision will breathe new life into Guildhall, future proof it and restore its place at the heart of Cambridge by creating outstanding public, civic and work space while retaining its heritage value.

Cambridge County Council's (CCC) aim is to Retrofit, Renovate and Revitalise the Guildhall to allow it to, once again, become the headquarters of the Council.

CCC are seeking responses that demonstrates the capability of the Guildhall to meet the 21st century office and civic requirements of the council, while continuing to provide revenue streams from commercial uses.

shown that it should be feasible to make the Guildhall operate at Net Zero, based on UK Green Building Council definition, with limited offsetting required.

These proposals have taken a fabric first approach, improving the thermal performance of the building envelope. The installation of modern highly energy efficient mechanical and electrical systems will further reduce the buildings energy use. Through the use of photovoltaic and solar thermal panels on the roofs, energy can be generated on site and used by the Guildhall.

During the subsequent RIBA Work Stage full surveys, including intrusive works, of the Guildhall should be undertaken as early as possible, the aim being to remove as many unknowns, this will allow for a more accurate cost estimate and programme to be established.

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A study of the existing building and review of the original architectural drawings has been undertaken.

This shows that the Guildhall has had very few changes made to the original structure and that the original fabric is, typically, of good quality. The Guildhall currently lacks inclusivity for all and opportunities to resolve this will need to be found.

The Guildhall already generates revenue by renting key heritage spaces to conferences and other events. CCC would like the Guildhall to generate greater revenue in the future.

Studies have been undertaken to establish the number of worksettings the Guildhall can accommodate. Initial planning shows, in total, around 400 worksettings can be provided.

New proposals for cycle and refuse storage will have to be established, with the aim of the Guildhall being an exemplar in Cambridge.

To allow the Guildhall to operate as the headquarters of CCC, and to align with the Climate Change Strategy 2021-26, the direct carbon emissions from the building need to be reduced to net zero by 2030. Analysis has

1.0

Introduction and brief

1.1 Introduction and brief

Background

CCC are seeking responses that demonstrate the capability of the Guildhall to meet the 21st century office and civic requirements of the council, while continuing to provide revenue streams from commercial uses.

The four key elements of the brief:

- Sustainability – the Council require the refurbishment of the Guildhall to be an exemplar project with net zero carbon aspirations.
- Office – the proposals should demonstrate that the Guildhall is capable of providing sufficient modern office desk space to accommodate the current and future needs of the council. Further information is attached on these and outputs should include variant options to accommodate the different levels of office need identified.
- Civic function – the proposals should demonstrate how the core civic functions will continue to be met. In addition, the building should accommodate a Customer Service function for the public.
- Commercial use – the Guildhall currently provides a range of commercial income-generating uses. Opportunity should be taken to maximise commercial use in addition to the office and civic functions.

CCC desking provision requirements

Based upon the Guildhall - Office Requirements briefing document and subsequent conversations with the project team, the design proposals should be developed on the following basis:

- 100 desk spaces
- 150 desk spaces
- 225 desk spaces
- 300 desk spaces

Clarifications to the brief following a series of workshops with CCC:

- Customer Service Centre (CSC) required. CSC to be accessed independently. Laptop driven.
- Customer Service Call Centre required. Desk numbers as part of overall desking requirements.
- Prayer room required
- First Aid room required
- Breast feeding room required
- Changing Places room is not specifically required. May be considered as the design develops.
- Server rooms are not required. IT systems will be cloud based.
- CCTV room required
- Legal archive required on site.
- Cycle storage and changing required on site
- Refuse - the existing remote refuse storage location at Corn Exchange should be considered as unavailable in the future and all refuse should be handled within the Guildhall.
- Tourist Information office is not required
- Courts provision is not required
- 24-hour access is not required, although some late night access is required.

Note

The works undertaken to date have been developed as a feasibility study and form a proof of concept. Given the short timescales involved the contents of this document should be read on the understanding that there is a considerable amount of work still to do, including Stakeholder engagement and working with the Transformation team.

2.0

Existing building assessment

2.1 Existing building assessment

Site and building history

The island site is collection of historic buildings culminating in the current arrangement forming what is collectively referred to as Guildhall.

In the 1930's, the whole of the island site was redeveloped. In 1933, a design by Charles Cowles-Voysey with assistants, Robert Ashton and John Brandon Jones, was chosen. In order to reduce costs, the existing 1862 Assembly Hall with the Peck & Stevens-designed Reference Library beneath, was retained and integrated into the new Guildhall arrangement.

George McDonnell's 1884 Reading Room extension to Peck & Stevens' library with its conical roof was retained and is currently a restaurant. This does not form part of the Guildhall.

The site also retains the two-storey building to the junction of Wheeler Street and Peas Hill, possibly by W.M. Fawcett, that was built in 1915-16 to replace the corn merchants gutted by fire in 1904. The building is of creamy buff Cambridge gault brick and Portland stone, with round-headed and roundel windows, first floor balcony on chamfered corner. The building is currently a restaurant and does not form part of the Guildhall.

For the council to continue operations during construction, the building was built in two contiguous phases, the range along Peas Hill being completed first. Phase 1 took place between 1936-37 and Phase 2 in 1946-48. The construction joint is visible in the brickwork to the right hand side of the northern elevation entrance to Market Square.

Description of the 1939 building from the Guildhall Conservation Plan May 2003:

"The new Guildhall is built largely of Williamson Cliff brown-grey bricks from Stamford, setting a precedent for a large proportion of the modern buildings in the City centre. Clipsham stone is used for the rusticated ground floor storey, set on a low granite plinth, and Clipsham is also used for the surrounds to the bronze-framed windows. The fine panelling in the committee rooms is English walnut while Ancaster stone was used to line the Entrance Hall. Maquettes for the bronze reliefs and sculptures were modelled by Lawrence

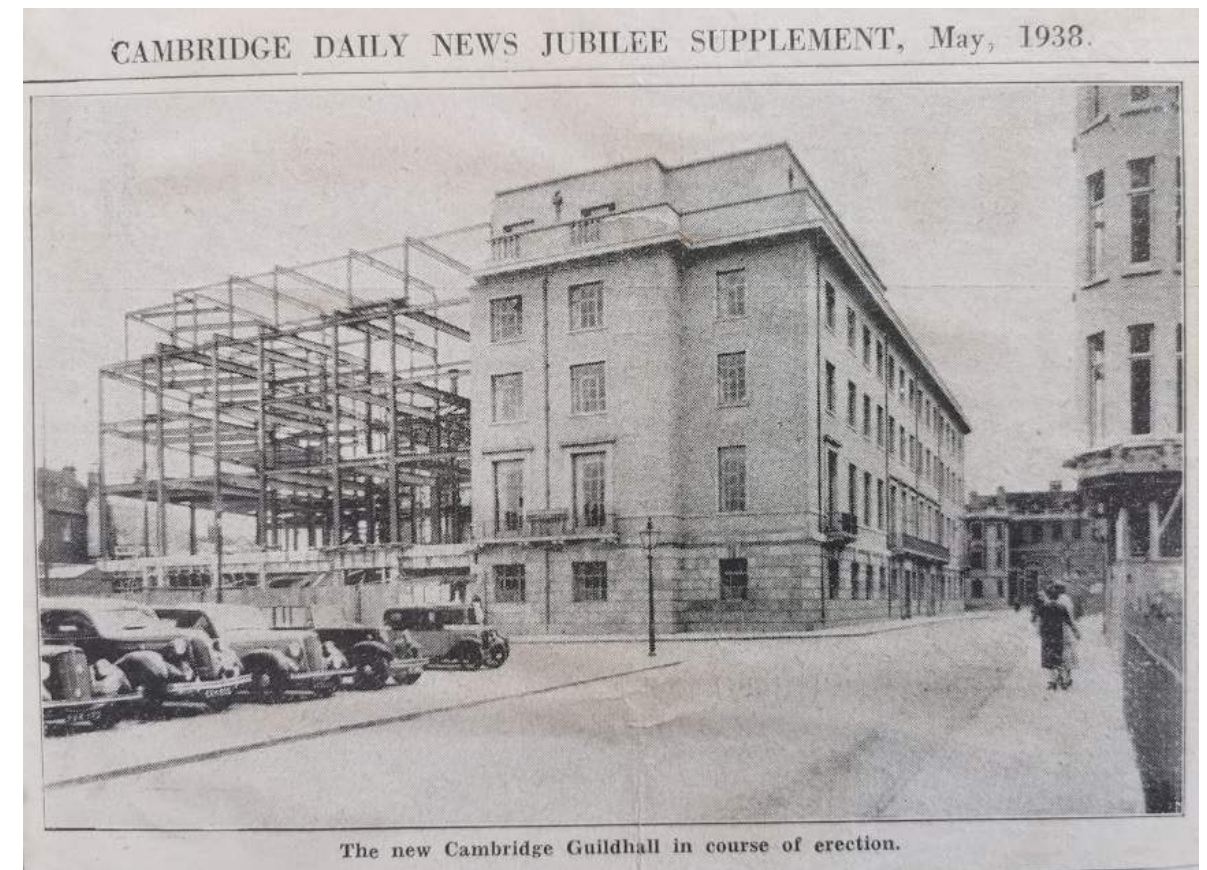
Bradshaw and John Brandon Jones. The Council Chamber is lined with pale leather panelling with joinery in Australian Oak. Oak was also used in the court rooms and the Small Hall. Floors are generally of teak block with those in secondary staircases and lavatories in terrazzo. Furniture was designed by the architects and made by Messrs White of Bedford.

The building is steel framed with floors, roof and stairs formed in reinforced concrete. The basement is tanked with asphalt.

The structure, under-floor heating and ventilation system were designed by Oscar Fabers, the engineers who had just-completed the new Bank of England. The large amount of ground water encountered during the excavations for the basement hampered progress but eventually, in the summer of 1939, the building was completed. The official opening was planned for October 9th 1939 but this had to be cancelled due to the outbreak of World War II.

Since 1939 the building has remained largely unchanged. The Library moved to the Lion Yard development in the 1970s and the vacated space converted to a Tourist Information Office. The reception area opposite the main Market Hill entrance has been remodelled and a few other minor alterations to offices on the upper floors carried out, but essentially the 1862 to 1939 buildings, both externally and internally, are preserved in their original form."

The Guildhall is Grade II-Listed.



The Guildhall under construction



Fig 7. The first phase complete in 1936

The first phase completed in 1936

2.2 Existing building assessment

Key observations



Market Square entrance

This is the primary face of the building however, the sense of arrival from Market Square is underwhelming. There is a distinct lack of footfall through the main entrance doors. The primary entrance doors are often in a closed position, detracting from a sense of openness and welcome.

The reception area is uninviting and lacks natural light. This detracts from the impressive stair and foyer to first floor. The film to the foyer first floor windows blocks views out and daylight in, creating a closed and gloomy feeling.

The entrance is not accessible. Accessibility from Market Square needs to be addressed to make the Guildhall's main entrance fully inclusive.



Guildhall Street entrance

The current entrance for the Assembly Halls. The sense of arrival is underwhelming once inside, undermining the building as a premium events space.

The entrance is not accessible.



Peas Hill entrance

The entrance previously serving the Tourist Information Centre, gift shop and coffee shop. Originally the entrance to the sessions court.

This is a more intimate entrance to the building leading to an independent set of rooms from the main Guildhall.

The entrance is accessible.

2.3 Existing building assessment

Key observations

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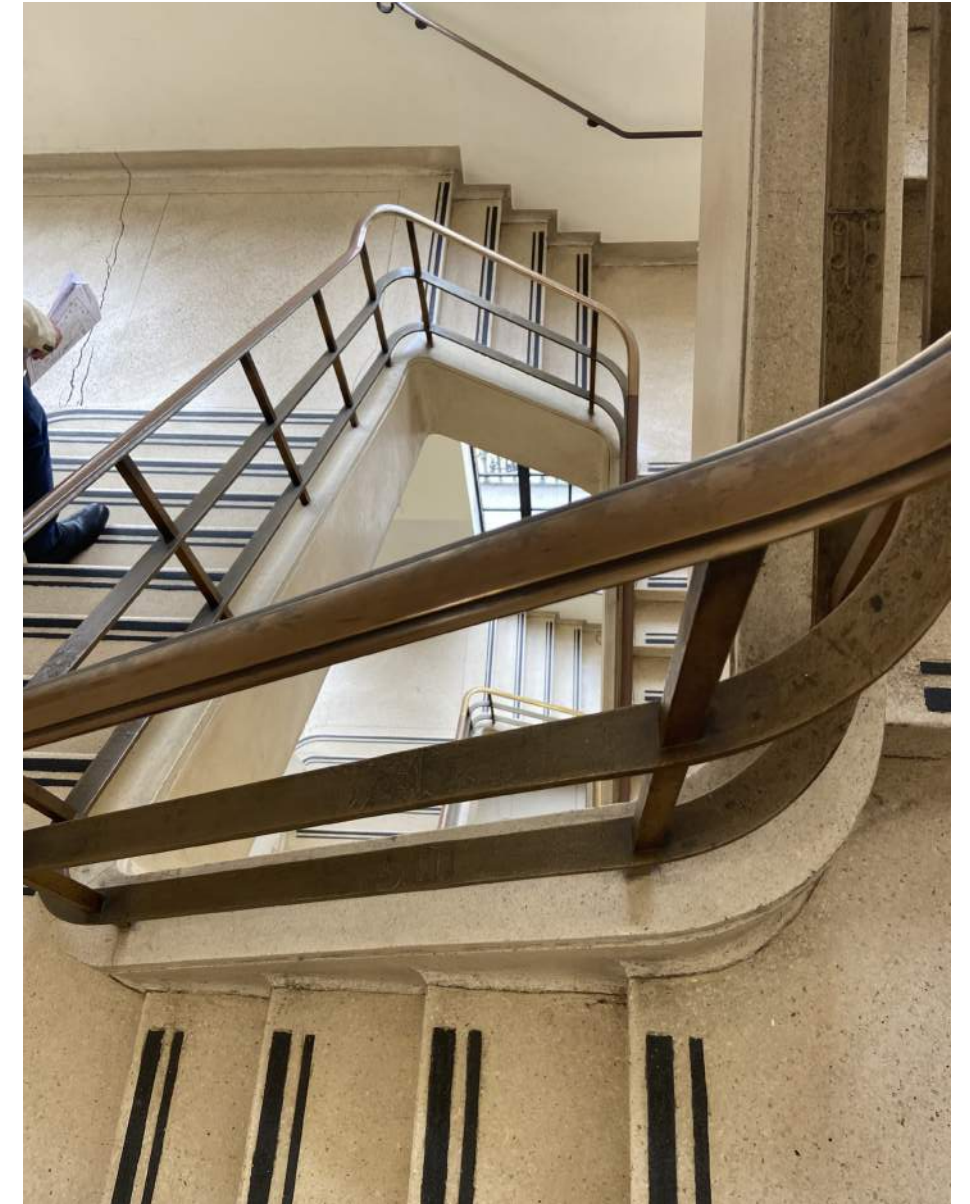
To improve inclusivity, wheelchair access should be provided at the primary entrance from Market Square.

As a public sector organisation, CCC will be required to anticipate access needs under the Equality Act and should make provisions where possible within the constraints of the listed building.



Vertical circulation is provided with two lifts and a good distribution of stairs.

The lifts are provided in strategic locations on the building plan arrangement adjacent to stairs and serving both side of the building. They run from the basement to the fourth floor, serving all levels of the building.



The building is well served through generous, high quality stairs strategically placed around the building.

The use of the stairs should be encouraged to promote health and well-being.

2.4 Existing building assessment

Key observations

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Internally, there are many long corridors with little connection to the outdoors or natural daylight. Many feel like service corridors.

Artificial lighting is poor. The corridors feel dimly lit and tired.

The use of unsympathetic modern floor finishes detract from the character of the original building in several corridors.



The corridors are of a generous width and provide good levels of accessibility for wheelchair users.



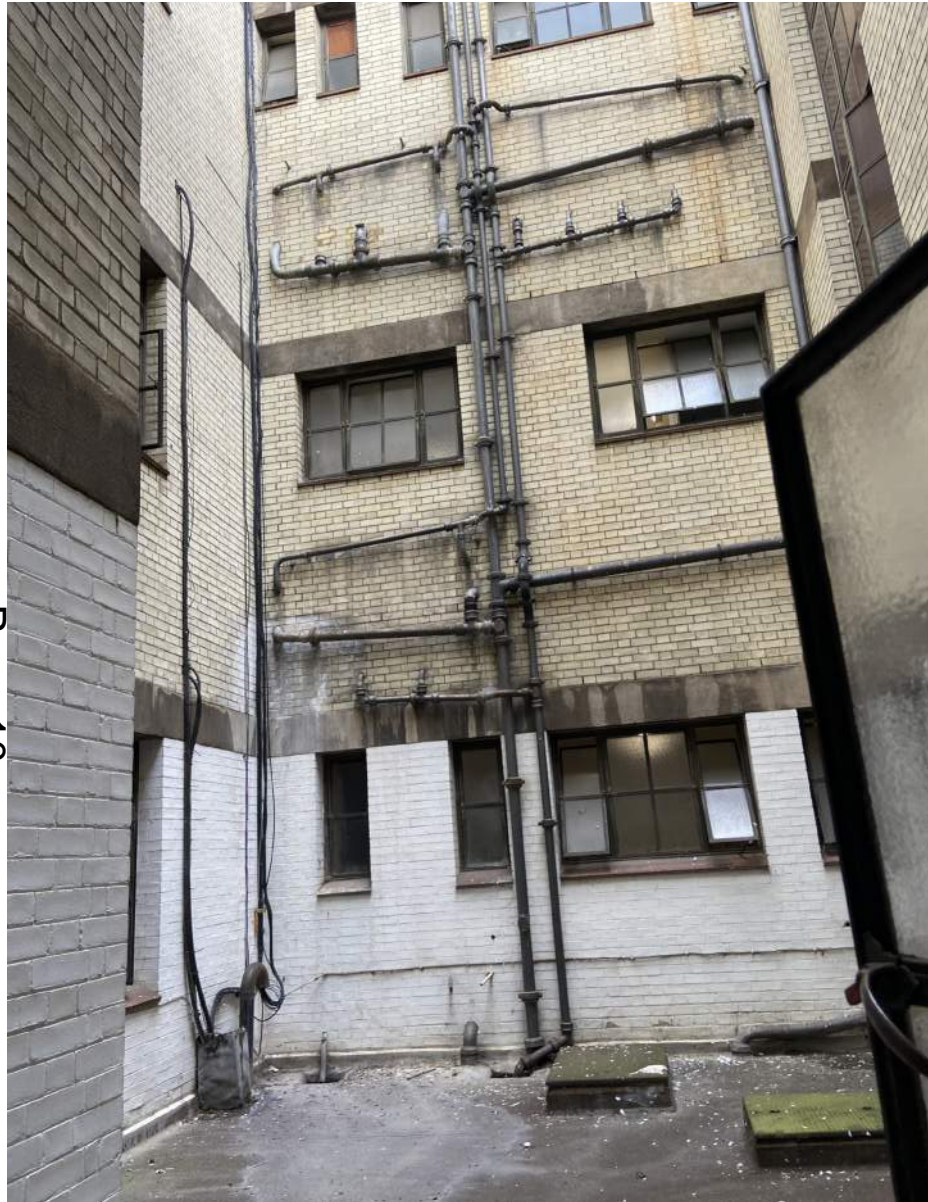
Many of the windows have film applied, or a stippled glass that obscures views and daylight and get in the way of navigation.

The corridors lack connectivity to the outside, and the repetitive nature results in a loss of orientation.

2.5 Existing building assessment

Key observations

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The two atria serving the ground to fourth floor do not provide benefit to the internal spaces of the Guildhall.

The existing atria are fitted with unsightly pipework from the WCs.



The basement is vast and occupies the full building footprint. It is poorly lit with little to no natural light.

Some of the basement is occupied by plant areas and a large section is given over to archive storage. A CCTV room and Streets Team welfare area is provided.

2.6 Existing building assessment

Key observations

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The Session's Court, former Tourist Information Office and gift shop are of historic architectural value, with timber marquetry and original light fittings and finishes.

The Sessions Court in particular is difficult to re-purpose in its current state due to floor level changes and a fixed seating arrangement.

The adjoining former Tourist Information Office has been cleared of internal fixed furniture and the floor has been raised to provide level access from the corridor, giving more opportunity for reuse.



The Council Chambers are of high architectural interest, however the fixed nature of the furniture restricts the flexibility of use of this space.

The Large Hall is of high architectural interest, with the original organ in-situ and original light fittings.

There is no level access at the Guildhall Street entrance.

The connection to the Small Hall provides flexibility for larger events.

Heating, cooling and ventilation to both halls requires review and updating.



The Small Hall is of architectural interest with roof lights and timber flooring.

The association with the catering kitchen and bar to the hall is beneficial however, the bar in particular is dated and requires updating and relocating to better serve the hall.

The Small Hall can act as a refreshments area for the Large Hall, supporting its use.

2.7 Existing building assessment

Key observations

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The office accommodation within the Guildhall varies in quality.

The highest heritage spaces, such as the Chief Executive's timber panelled office and the Mayor's Parlour, may better serve communal uses, such as a meeting room.

The majority of office accommodation to the upper floors is tired and drab with poor lighting quality and lack of daylight. Fittings and furniture require updating to make the spaces appealing.

Wide uninspiring corridors serve the office accommodation at the upper levels of the building. They reduce the benefit of natural daylight to the office accommodation.

Underutilised space contribute to a poor net-to-gross.

Locker and storage provision to the perimeter offices spills out into these space, further adding to its unappealing nature.

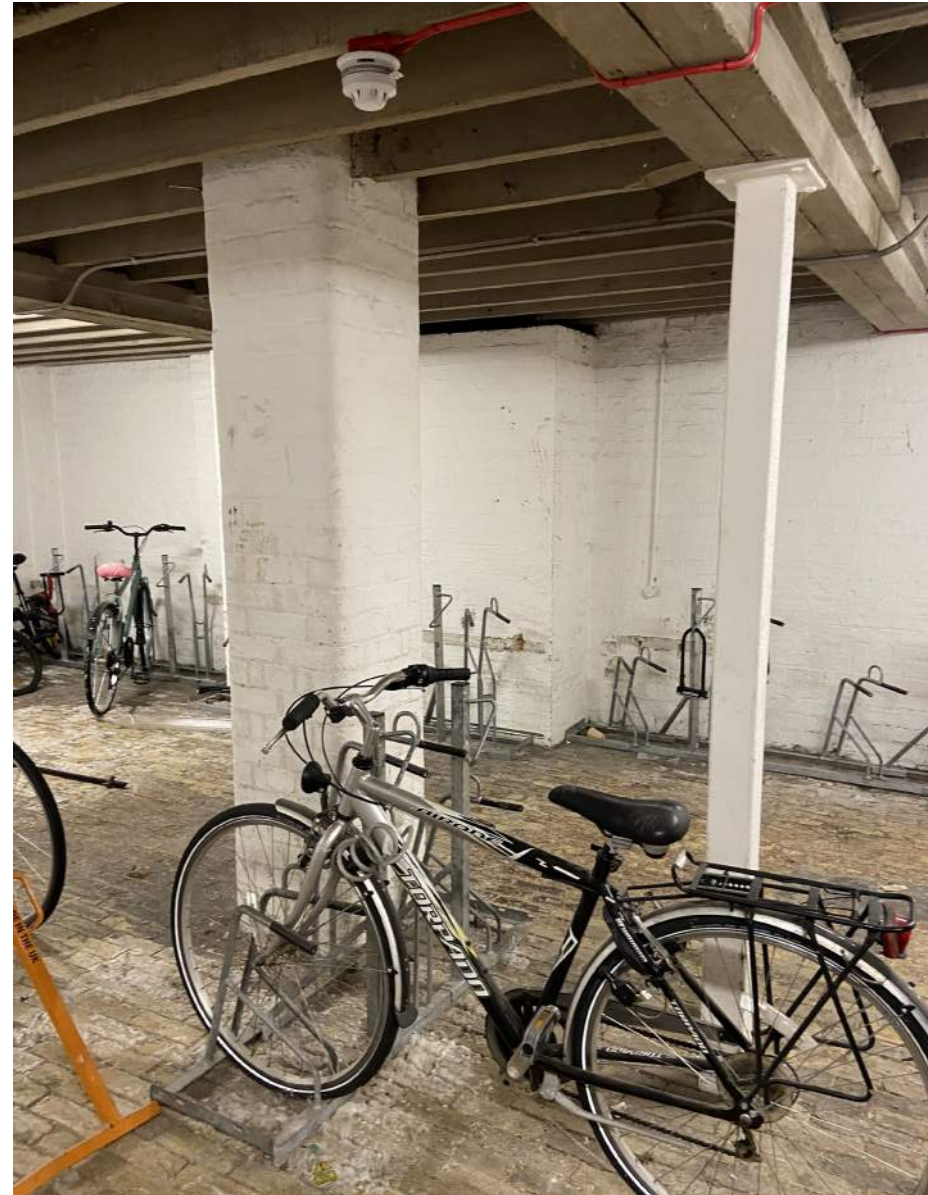
Original features are undervalued in some of the office accommodation, detracting from the special interest of the building.

All the existing office spaces benefit from a concrete ceiling providing high levels of thermal mass.

Modern floor finishes conceal the potential of original timber flooring.

2.8 Existing building assessment

Key observations



WC provision is provided with a combination of historic terrazzo and modern fit-outs. The quantum and accessible provision is inadequate by modern standards and will require increasing in number and quality.

Tea points and kitchenettes are provided in a range of individual rooms and corridor standpoints. Neither provision is desirable, and the corridor provision in particular detracts from the historic character of the building.

Cycle storage and changing provision is provided in the lower ground level of the Guildhall with changing at ground floor.

Access to these areas is difficult with numerous steep ramps and steps.

The current cycle storage and changing provision is inadequate for the future use of the Guildhall. It does not meet modern standards or the requirements of the council.

On site refuse is accommodated within the Guildhall stair core. The location is compromised and detracts from the quality of use of the entrance for other purposes.

The refuse storage provision is inadequate to accommodate the refuse and recycling requirements of the Guildhall.

2.9 Existing building assessment

Heritage assessment

Assessing the Guildhall's potential for change needs to be undertaken within the context of the Listed Building status. Justification for change will be assessed against the significance of the building and its context.

Assessing Significance

Significance, in terms of heritage-related planning policy, is defined in the Glossary of the National Planning Policy Framework as "the value of a heritage asset to this and future generations because of its heritage interest".

Significance derives not only from a heritage asset's physical presence, but also from its setting.

The National Planning Policy Framework definition further states that in the planning context, heritage interest may be archaeological, architectural/ artistic or historic. This can be interpreted as follows:

Archaeological interest

As defined in the Glossary to the National Planning Policy Framework, there will be archaeological interest in a heritage asset if it holds, or potentially holds, evidence of past human activity worthy of expert investigation at some point.

Architectural and artistic interest

These are interests in the design and general aesthetics of a place. They can arise from conscious design or fortuitously from the way the heritage asset has evolved. More specifically, architectural interest is an interest in the art or science of the design, construction, craftsmanship and decoration of buildings and structures of all types. Artistic interest is an interest in other human creative skill, like sculpture.

Historic interest

An interest in past lives and events. Heritage assets can illustrate or be associated with them. Heritage assets with historic interest not only provide a material record of our nation's history, but can also provide meaning for communities derived from their collective experience of a place and can symbolise wider values such as faith and cultural identity.

Historic and social significance

"In 1224, Henry III gave permission for the burgesses of Cambridge to use a house next to the market place as a town gaol. Soon after they began using an adjacent building to collect tolls from the surrounding market stalls and this began a municipal use of the site that has continued unbroken for well over 700 years.

To begin with the Guildhall site was not at the true centre of Cambridge - that was on Castle Hill - but, as the University began to dominate in the 14th and 15th Centuries, Market Hill became the heart of the city and the significance of the area as an administrative hub grew. The Municipality nearly lost the gaol to the University in 1601 but, having had their ownership confirmed, they went on to steadily develop and expand their site, building a larger Town Hall, designed by James Essex, in 1782 and taking over the county-owned Shire House in 1842.

In the late 1800s, they were able to add to these by building an Assembly Hall, Library and additional office space on the south side of the site.

By the 1930s, the Corporation owned all the buildings on the "island site" bounded by Market hill, Guildhall Street, Wheeler Street and Peas Hill. In 1936 this enabled them to build the substantial building, designed by Charles Cowles-Voysey, that now dominates the Market Square...

The 1930s Guildhall is a fairly rare example of a Listed Building of this period and most of the interiors remain as they were originally conceived, the principal rooms being fitted out to an extremely high standard."

— Extract from the Guildhall, Cambridge Conservation Plan, Freeland, Rees, Roberts Architects, 2003.

The greatest significance of the site is its long tenure of continuous municipal use in a very central location. Its use is strongly linked with the market place, which has been in the same area for at least as long.

Architectural and artistic interest

The following summary is derived from 'The Guildhall Cambridge Conservation Plan, May 2003 by Freeland Rees Roberts Architects.

The Cowles-Voysey building was built in two phases between 1936 and 1939 and includes a large balcony at the front from which important proclamations could be made.

The Guildhall occupies a prominent presence over the Market Square and illustrates the role of the space as the historic focus of civic administration in Cambridge. The construction is steel frame, concrete floors, low granite base, rusticated clipsham stone ground floor storey, grey-brown Stamfordstone brickwork upper stories, bronze balconies and window frames with Clipsham stone surrounds. Rainwater downpipes are made of lead.

Either side of entrance stand large decorative bronze blocks with aquatic scenes on granite bases. Bronze doors depicting agricultural scenes create an imposing entrance. These elements are considered of high artistic interest.

Street elevations to the Guildhall are considered to be of high architectural significance.

Internally, primary spaces include the Ancaster Stone entrance foyer, the Council Chamber, Committee Rooms, Members' Room, Mayor's Parlour, Chief Executive's Office, Sessions Court and Peas Hill stair case. These spaces contain largely unaltered ornate interiors with English Walnut panelling and original fittings, such as lighting, bronze toggle switches, fireplaces and clocks. The Peas Hill Stair comprises terrazzo floors and fine brass balustrade.

The Small Hall and Large Halls also are largely unaltered with interiors intact. The 1862 Large Hall/ Assembly Hall by Peck & Stevens' is complete with round-headed windows with heraldic stained glass. The organ was built by William Hill in 1882 and rebuilt by Hill, Norman & Beard with modern electrics in 1925 and remains in situ today.

A 1782 foundation stone, possibly from an early mediaeval synagogue with latin inscription by the antiquary William Cole is set within the first floor stair

lobby to Guildhall Street. It commemorates the building of a new town hall in 1782 by James Essex. The stone was rediscovered in the 1936 building work and set behind glass in the current position representing the historical and social significance of the site.

The Guildhall is of high architectural and artistic significance in the interior primary spaces and rooms.

Secondary spaces within the Guildhall are currently underutilised as they do not meet modern use demands. These spaces include the typical offices to the upper floors, corridors with original cross-corridor double doorsets complete with original ironmongery and copperlights.

Secondary spaces within the Guildhall are of medium significance.

Modern partitions, light fittings, secondary glazing and doors are of no significance and many detract from the Guildhall interiors.

Extensive basement areas to 1936-39 building are largely used for plant and storage. There is little architectural character within the basements which are considered of low significance.

Heritage category	Listed, Grade II
List entry #	1268372
Date first listed:	02 October 1996
List entry name:	Guildhall
Statutory address:	Guildhall, Market Place, Cambridgeshire

2.10 Existing building assessment

Existing internal environment — office occupant experience

A welcoming, light and vibrant building which performs well for its users is key to providing a sustainable, viable future for Guildhall.

The following observations on the existing internal environment have been made:

Typical offices to upper floors

General observations

As noted in the Key Observations section, the existing typical upper floor office provision is of poor quality when compared to a modern office environment. This can lead to reduced demand, lack of employee motivation and reduced health and well being.

A more detailed analysis is provided below:

Existing building envelope

The offices generally benefit from good levels of natural daylight, however the provision of natural daylight to both sides of the office would improve occupant experience in respect to both daylight and ventilation

Existing external walls - intrusive investigations have not taken place, however it is assumed that there is no insulation to the external walls. Interrogation of the original drawings of the Guildhall (example top right) shows that there are cavities within the external walls. This provides an excellent opportunity to improve their thermal performance.

What is also clear from the original drawings, and usual for heritage buildings, is the prevalence of thermal bridges. Careful detailing, including internal linings, will need to be employed to lessen the impact of these details.

Insulating the external walls will provide a thermally stable internal environment benefiting the occupants and improving environmental performance.

Existing bronze single glazed windows - are in good condition, however a light touch overhaul to keep them in good working order is required so they can be easily used by occupants. A thermal upgrade to the windows in order to improve the building envelope performance and occupant comfort in relation to temperature and

draughts when adjacent to the windows will be required. This should be done in conjunction with the existing heritage windows.

Existing modern secondary glazing - require replacement to meet modern performance and operational requirements.

Existing blinds - to reduce solar glare are dated and require replacing.

Existing building services

Mechanical heating, cooling and ventilation - typical offices largely operate with natural ventilation enabled as the site appears to benefit from minimal acoustic issues and good air quality externally which is beneficial for occupant satisfaction and reducing energy demand. However, occupant control over temperature is limited with a fully naturally ventilated building. A number of rooms were observed to have plug in free standing radiators indicating a lack of heating provision as well as desk mounted fans indicating a cooling and ventilation issue.

Services fit out - surface mounted modern servicing for small power and data is visually obtrusive and ill-suited to a heritage building. The installation provides limited flexibility for adaptation or upgrade and is out dated in appearance.

Modern light fittings - are visually obtrusive with surface mounted conduit and batton fittings. Providing low energy lighting with a distribution for desking will aid in improving occupant comfort. Operation mechanism including passive infra red (PIR) will aid in reducing energy demand.

Furniture, fittings and equipment

Modern finishes - poor quality, worn floor finishes conceal potential for original quality. The original flooring is of high quality, requires minimal maintenance and adds unique character.

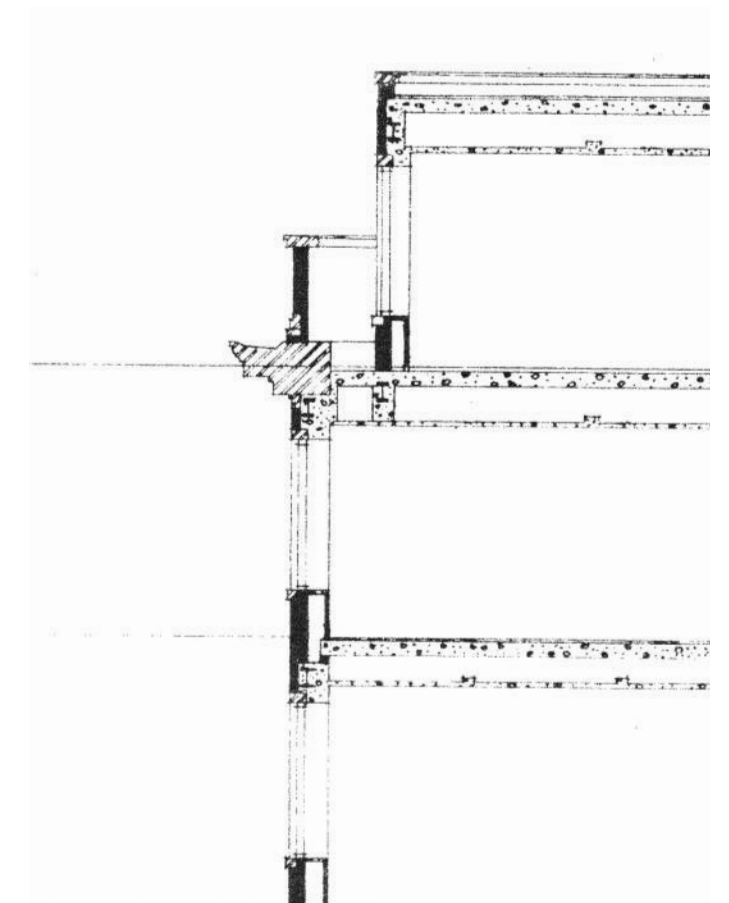
Furniture fit out - is dated in appearance and with little consideration to biophilic design and materials or ergonomics. Biophilic design and materials provide an interior complementing health and well being.

Acoustic environment

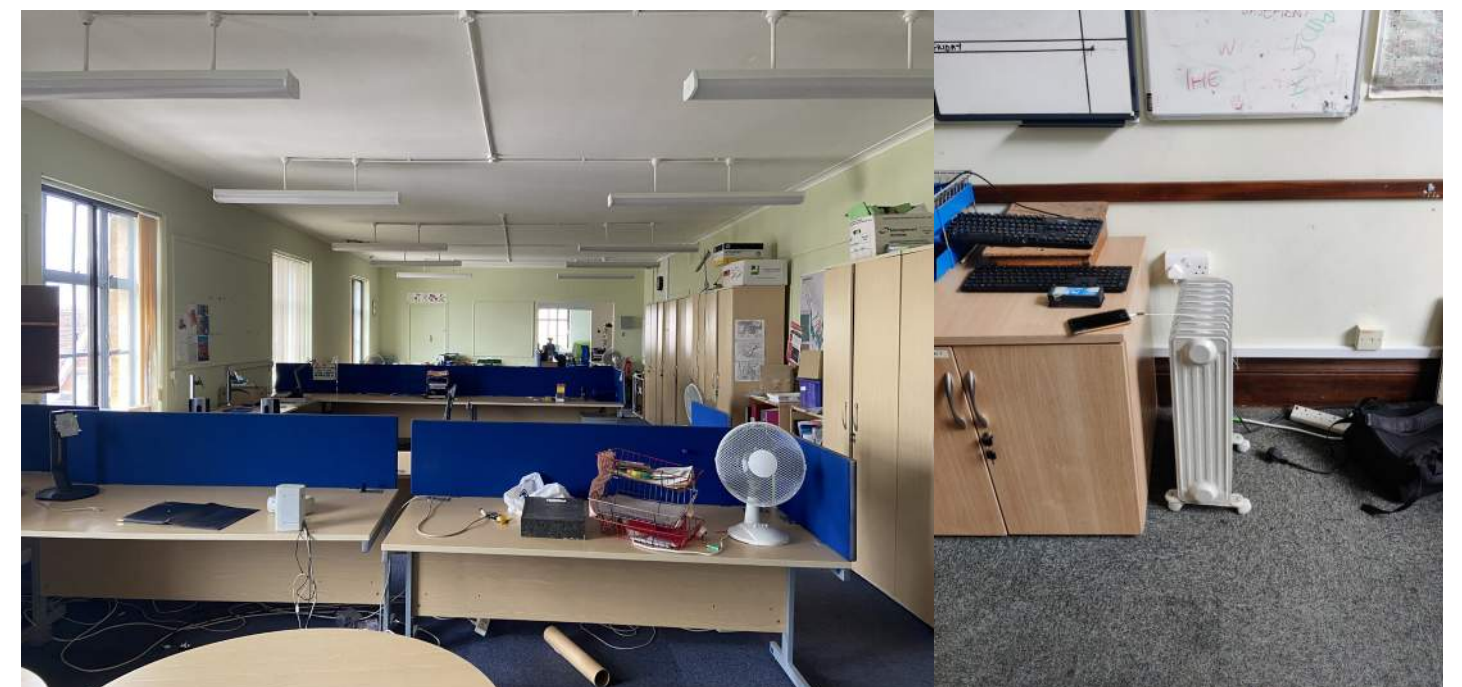
Acoustic absorption is provided through the existing carpet, desking screens and people.

Heritage spaces and ornate primary rooms

These spaces are of a high quality, however they require thermal upgrade, modern servicing and light touch refurbishment to panelling and joinery.



Original section showing cavities in external wall and cold bridging



Existing Typical Upper Floor Office Environment

3.0

Sustainability

3.1 Sustainability

Summary

This section focuses on the performance of the building and the approach taken to reduce the Council's impact on the environment.

The industry standard when assessing carbon emissions is the 2030 targets of the RIBA 2030 Climate challenge, along with LETI's 2030 design targets for upfront and In Use embodied carbon. These will be used to show that the Guildhall has been transformed into an energy efficient building prior to any onsite energy generation or offsetting of carbon emissions.

A 'fabric first' approach involves optimising the performance of the components and materials that make up the building fabric itself, before considering the use of mechanical or electrical building services systems.

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Initial analysis of the Guildhall has shown that the thermal performance, known as U-values, of the existing fabric has the capacity to be improved and brought in-line with modern standards.

Airtightness is primarily focused on the elimination of all unintended gaps and cracks in the external envelope of the building. This is an essential part of creating a healthy, comfortable, energy-efficient environment. In contrast, air leakage is where leaks occur due to gaps and cracks that should not be there in the first place.

Improving the fabric first will reduce the amount of energy needed to operate the building. It is then important that the most efficient systems are used during the building operations.

With the National Grid decarbonising, see the Future Energy Scenarios 2018 published by the Nationalgrid ESO, there is a push towards buildings becoming all electric. This means no fossil fuels will be used to operate the Guildhall, so as to support the 2050 decarbonisation target.

Air Source Heat Pumps (ASHP) are proposed as a modern alternative, and improvement, to gas boilers. A heat pump extracts warmth from the outside air before concentrating and transferring it into the building to provide heating and hot water.

ASHP's are incredibly efficient, converting each kilowatt (kW) of electricity into 3-4kW of heat. This means they're between 300%-400% efficient, compared to a gas boiler at around 90%. They also have the capacity to provide cooling as well as heating, which is beneficial in this scenario.

The use of modern electrical systems and equipment within the offices, meeting rooms and assembly spaces will help limit the amount of energy used to run the Guildhall.

Even with an efficient building fabric and modern fittings buildings still require the input of energy to run. This is where the use of 'renewables' comes in. With the use of photovoltaic (solar) panels and solar hot water collectors the Guildhall can generate energy to be used on site. These systems take energy from the sun and convert it into electricity and hot water.

These key principles have been used during the development of an early stage building analysis model.

Whole Life Carbon

The construction sector contributes around 40% of global carbon dioxide emissions and can therefore play a major role in the reduction of greenhouse gas emissions.

Carbon emissions in construction are typically broken down into two categories;

- Embodied Carbon
- Operational Carbon

These categories are described as follows by the World Green Building Council:

Embodied carbon

Embodied carbon consists of 'Upfront' and 'Whole Life' emissions.

Upfront Embodied Carbon

Carbon emissions associated with materials and construction processes throughout the construction/ refurbishment of the Guildhall. Upfront Embodied

carbon therefore includes: material extraction (module A1), transport to manufacturer (A2), manufacturing (A3), transport to site (A4), construction (A5).

In Use Embodied Carbon

Carbon emissions associated with materials, maintenance & replacement processes during the use of the Guildhall. Use phase (B1, eg concrete carbonation but excluding operational carbon), maintenance (B2), repair (B3), replacement (B4), refurbishment (B5), deconstruction (C1), transport to end of life facilities (C2), processing (C3), disposal (C4).

Operational Carbon

The emissions associated with energy used (B6) to operate the building. This is broken down into 'Regulated' emissions (space heating, cooling, lighting, hot water and ventilation) and 'Un-regulated' emissions (small plug-in equipment, IT, servers and other machinery).

Carbon Analysis

The analysis contained within this report deals with Operational Carbon.

The proposed design aims to achieve the 2030 targets of the RIBA 2030 Climate Challenge for operational energy.

Through analysis we believe the Guildhall can be operationally Net Zero. The definition of Net Zero (by the UKGBC) is as follows;

"When the amount of carbon emissions associated with the building's operational energy on an annual basis is zero or negative. A net zero carbon building is highly energy efficient and powered from on-site and/or off-site renewable energy sources, with any remaining carbon balance offset."

Embodied Carbon has not yet been measured.

As the Guildhall is an existing building a large amount of carbon is locked in the building fabric which is to be reused. With careful design and material selection embodied carbon can be minimised and offset once construction is complete.

Again the design will aim to achieve the 2030 targets of the RIBA 2030 Climate challenge, along with LETI's 2030 design targets for upfront and In Use embodied carbon. In order for the Guildhall to be Net Zero Embodied Carbon we will need to do the following;

"When the amount of carbon emissions associated with a building's product and construction stages up to practical completion is zero or negative, through the use of offsets or the net export of on-site renewable energy."

To be truly Net Zero In Use Embodied and Operational Carbon will need to be measured and offset accordingly via a verified scheme.

Heat Network

We are aware that a Cambridge 'Heat Network' is being developed which could help decarbonise the Guildhall's operations.

At present our modelling does not make use of the network.

We have worked in this manner due to the number of unknowns about the network given the infancy of the project. The Guildhall still has the potential to be Net Zero Carbon in operation and connection to the network at a future date should only reduce the carbon intensity of the Council's operations.

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