5.4 Community

5.4.2 Dedicated Community Space

The revised scheme continues to involve local partners in order to ensure the ground floor and wider public realm is for everyone. Existing and future partnerships are central to the place that we will create here, and the basis for the way that we will approach our role within the community.

The Revised Application has replaced the Community and Cafe Pavilion with a dedicated community facility within Plot 10. Located near the St Matthews' entrance, it will be a be a destination point within this area of the site. Opportunities will be created that can provide social and educational spaces for all.

A concept for the Community Hub is being developed in partnership with Abbey People, Romsey Mill and Cambs Youth Panel. The space itself will be extremely flexible and will be informed by continued engagement with these groups.



We expect the space to be able to host a wide range of events for local clubs with the following having been suggested during community consultation.

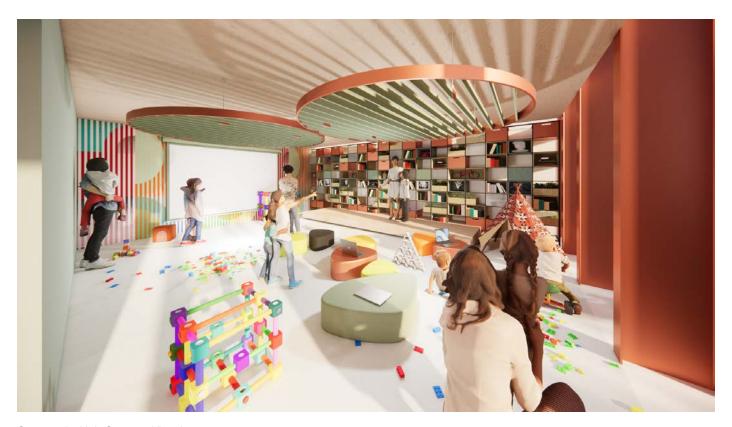
- Coding clubs
- An under 5's drop-in
- Homework support clubs
- Art and craft classes
- · Tai Chi, line dancing, and
- yoga
- A repair café

The Community Hub would also be available for hire with discounted rates for local residents and community groups.



Illustrative visual of one of the Community Hub concepts being developed in association with local groups





Community Hub Concept Visuals

5.4 Community

5.4.3 Further Community Facilities

STEM Education Space, Cambridge Science Centre

A new STEM educational space will be created at the Beehive. The proposed space will be an energetic hub of youth engagement and activity throughout the day, providing an exceptional and distinctive 'STEM' educational resource nestled in the heart of a vibrant Beehive community. The current concept, at time of submission, is being developed with Cambridge Science Centre.





STEM Education Space Powered by Cambridge Science Centre

Skate the Streets by Cam Skate

Skateboarding is a growing sport and Cambridge is home to the 2019 and 2022 UK Street Skateboarding Champion. We are working with Cam Skate to co-design skatable streets and skatable furniture within the Beehive to support skaters of all abilities, build confidence and raise the profile of skating in the city. The illustrative design dedicates the space between Plot 5 and 6 for skating use.



Consultation with Cam Skate, June 2023

Inclusive Open Space Powered by Make Space for Girls

Make Space for Girls is working with Railpen to help plan the open space across the development to ensure it is a welcoming and inclusive place for all.

The Make Space for Girls team is working with a group of local young girls and women to investigate the experiences of young girls and women in the local area. This investigation will contextualise their experiences of youth provisioning to inform the youth strategy and open space strategy for the Beehive.



Consultation with Cambridge Youth Panel, April 2023





5.5 Highways

As per the Original Application, the arrangement of routes and facilities for transport have been designed to support the planned modal shift away from private car use towards more sustainable transport modes. The below explains how the high-level strategies have been developed for the Revised Scheme:

Pedestrian Access

As previously, the site will be accessible to all with step-free access around the site. Existing pedestrian connections will be enhanced with wider footways than existing, which will be safely segregated from other transport modes. There will be no gates or barriers to entry with the site being accessible 24 hours a day and 7 days a week. The experience for pedestrians has been enhanced with the Revised Application Scheme with a clearer and direct route through the site and a junction on Coldham's Lane that favours pedestrians over vehicles. The management of conflict between pedestrians and cyclists has been further controlled through the Design Code.

Cycle Access

Following consultation, people asked for a stronger cycle route through the site which has been implemented and will be a safe and accessible link to the Chisholm Trail and the city beyond. The cycle infrastructure has been tested and developed to ensure the width of the cycle route corresponds to the expected flow of cyclists and is controlled within the Design Code. A considered layout of cycle routes that strikes a balance between safe and efficient cycle movement and biodiversity and public realm at the heart of the site.

Public Transport

The bus stop has been relocated between Plots 8 and 9 and supported by an enhanced bus service provision. The bus stop is situated at this location as it enables the greatest accessibility for all due to its close proximity to the centre of the site and the two key open spaces. For workers, it is located closest to the majority of commercial addresses of the plots that bound the civic plaza. For visitors to the site,

the bus stop allows for direct access to the two key open spaces and the majority of publicly accessible ground floor uses.

Car Access

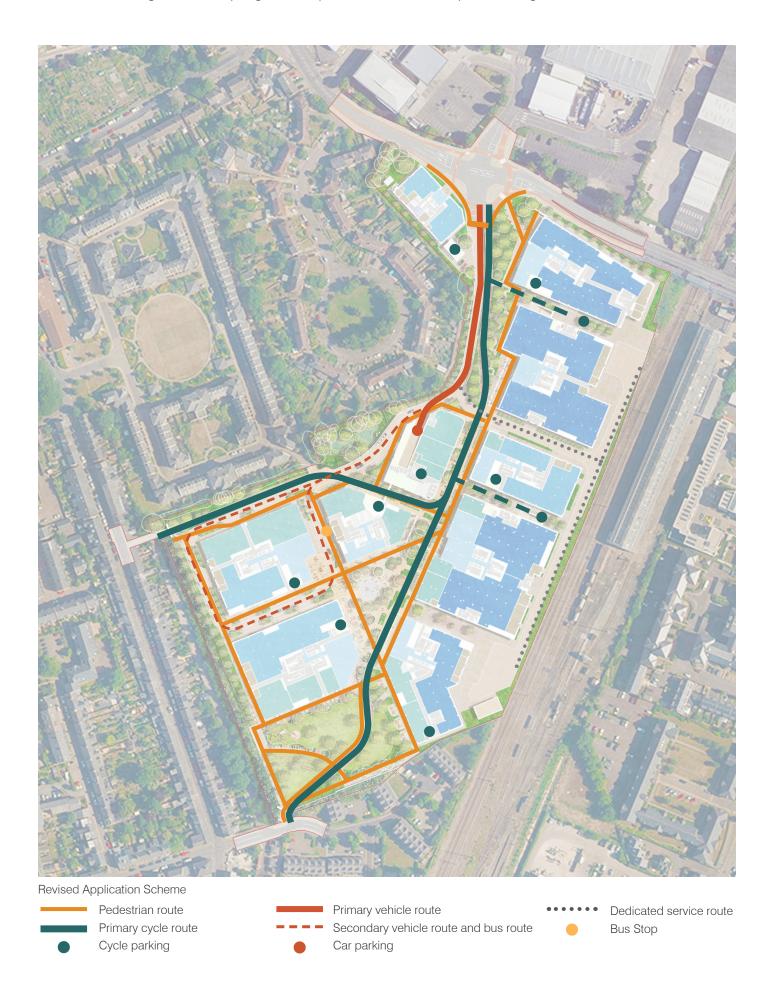
The car parking has been relocated to Plot 10 in the Revised Application Scheme to consolidate the majority of car parking in one place and reduce private car vehicle movements on the site. The relocation of the car park has also enabled a simplification of turning and crossing points within Abbey Grove and reduces the necessity for users of the Beehive Greenway to cross private car routes.

Service Access

The service loop has been reduced in length to give more space back to public open space with the service lane along the railway remaining as was shown in the Original Application Scheme.



Original Application Scheme



5.6 Massing Changes

5.6.1 Neighbouring Conditions - Summary

The scheme has been shaped throughout the design development through consultation with the public and planning officers to create buildings which work with local context and manage wider city skyline considerations.

The Original Application Scheme moderated the impact to the neighbours by implementing a three storey maxmimum height on the plot edges that bounded the residential boundary. This principle helped to control the change in scale between the Conservation Area Heritage Asset and the taller elements of the scheme.

This principle has been developed in the Revised Application Scheme and further principles have been introduced to further improve the neighbouring residential boundary conditions.

Increasing Separation at Boundaries

The consultation comments from the Original Application Scheme considered the distance between the boundary plots and the residential properties to be too close. The Revised Application Scheme has moved the footprints further into the site and away from the boundaries, consolidating the bulk of the mass in the centre of the site. This approach has led to the apparent reduction in the built volume of the plots when viewed from the neighbouring gardens.

Creating Green Buffer Spaces

The southern park has been formed to enhance the entrance feel from the Sleaford Street entrance and reduce neighbour impact by creating more green space around the boundaries. This will minimise overlooking and visibility of the plots.

Reducing Length of Boundary Facing Facades

The creation of the southern park further informed a reduction in the length of the facing facades onto Rope Walk. The previous Plots H and I have been replaced with Plot 7 and a significantly reduced length facade facing Rope Walk.

Centering of Mass

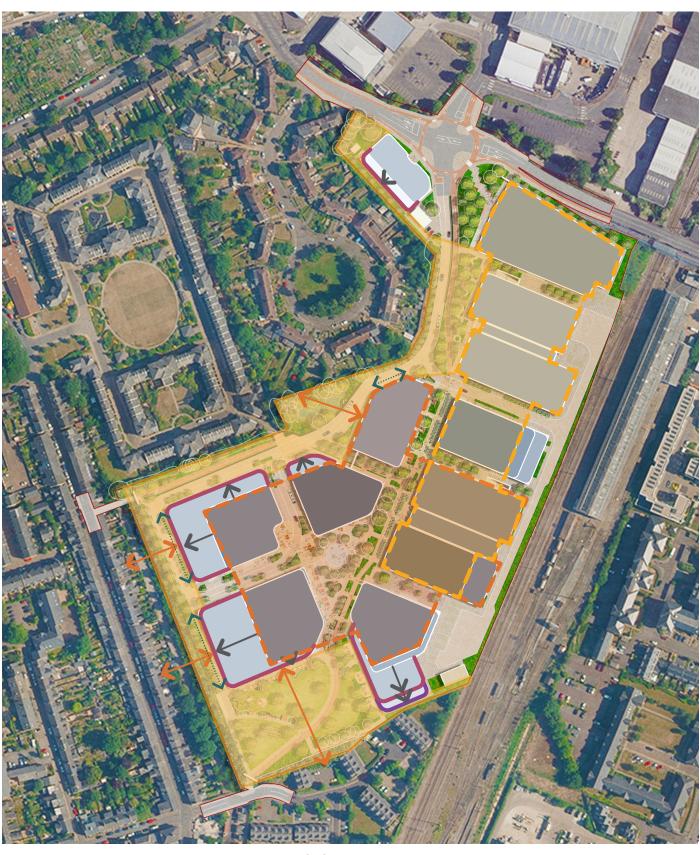
As per the strategy employed in the Original Application, the Revised Scheme will focus the mass of the taller buildings towards the centre of the site in order to limit townscape impact on immediate to intermediate distance local views. Pushing the tallest built elements inwards reduces overlooking for neighbours and height of the proposal at the boundaries. Plots 2, 5, 6 and 9 have all been reduced in height by 1 storey.

Design Code

The Design Codes that accompany the application have been developed to further control the boundary conditions and impact on the neighbours. This includes more controlled codes for;

- Overlooking, glazing and architecture on the facades facing the boundary with residential properties.
- Required depth of green buffers on the boundaries of residential properties.
- Implementation of tree lines, especially at Plot 1 for screening.

Refer to Section 3.0 for further details on how the plot by plot changes have benefitted the neighbouring conditions.





Three Storey Edge
Two Storey Edge
Reduction in Height (In direction of arrow)
Increased Green Buffers



Increased Distance
Reduced Length of Facade
Centered Mass
Rise and Fall of Massing

5.6 Massing Changes

5.6.2 Neighbouring Conditions - Illustrative Design

As illustrated on the previous page, there are clear principles that have been set up to manage the impact on local townscape and to create high quality space at site boundaries:

- Buildings near to residential boundaries should be no taller than three storeys at their leading edge unless the length of facing facade is limited.
- The leading edge should be minimised in length where possible, the Design Code should then influence architecture that breaks down the length of the facade.
- Where separation between proposed buildings and residential neighbours is increased, the height of the facing building may increase with appropriate massing stepping.
- Where separation between proposed buildings and residential neighbours is increased, high quality green space should be introduced to minimise overlooking and enhance the quality of space.
- All taller elements are located further from the residential boundaries.

The following pages demonstrate how the illustrative design sections relate to other buildings within the local area. These comparisons are provide to allow for clear communication of the expected scale of space and sense of containment that the new buildings will create and how this is comparable to existing conditions within the city.



Open green space at the boundaries of residential properties. Original Application Scheme



Open green space at the boundaries of residential properties. Revised Application Scheme



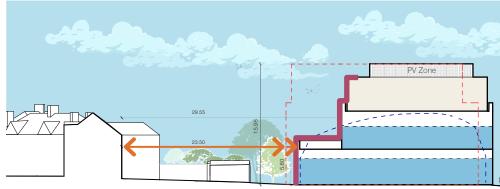
Existing

Original Application

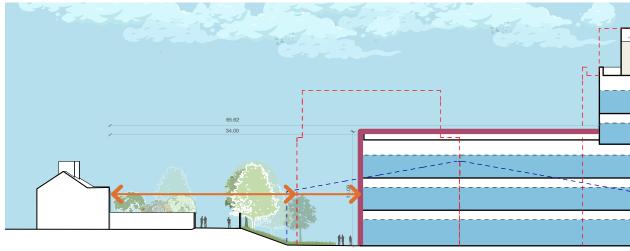
Edge Defining
Scale of Space
Increased Distance

37.80 27.30 88 98 99

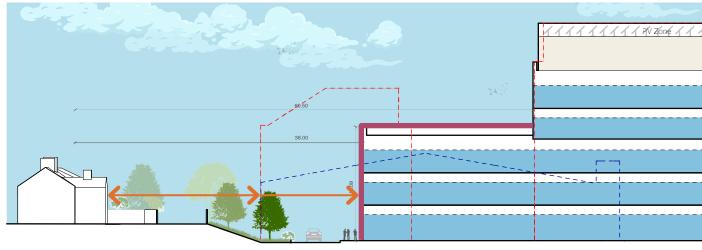
1 | Section through Plot 8 and St Matthews Gardens



2 | Section through Plot 1 and Silverwood Close



3 | Section through Plot 7 and York Street



5.6 Massing Changes

5.6.3 Neighbouring Conditions - Local Comparisons

The following pages illustrate local new developments around Cambridge that demonstrate similar neighbouring conditions of a change in scale from existing terraced housing.

The following examples include;

- Anglia Ruskin Science Centre
- Anglia Ruskin Young Street Building
- St Matthews Gardens



Anglia Ruskin Science Centre and Broad Street

This example cuts through a development for the University of Anglia and a 2 storey terraced house. In comparison, Plot 1 is set-back by an additional 11.2m and the set-backs at upper levels are larger in depth.

Close



Section through Plot 1 and Silverwood

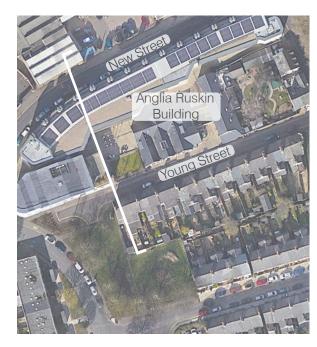
Local Example Section Outline

5.6 Massing Changes

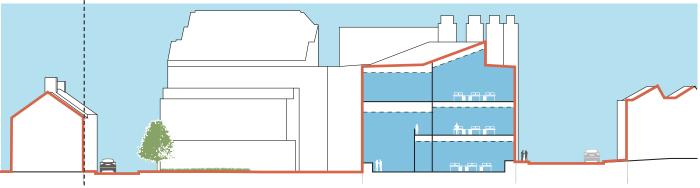
5.6.3 Neighbouring Conditions - Local Comparisons

Anglia Ruskin Young Street Building and Young Street

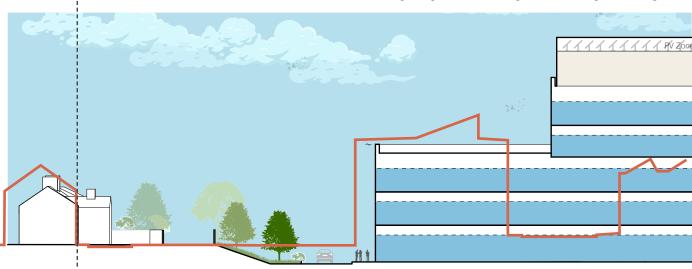
At Young Street stepped massing and tree planting are used to moderate a change in scale between a the front of two-storey terraced houses and the new education building. Similar techniques are employed in creating greater visual separation between Plot 8 and the houses of York Street.







Section through Anglia Ruskin Young Street Building and Young Street



Local Example Section Outline

Section through Plot 8 and Rope Walk and York Street

St Matthews Gardens

St Matthews Gardens is a direct neighbour of the site and also has a relationship with the Conservation Area residential terraced houses. Plot 8 follows a similar step in massing compared to the existing condition of St Matthews Gardens and York Street. A similar level of containment is created in both scenarios due to the stepped massing of Plot 8.



Facing Residential Building Line



5.6 Massing Changes

5.7.4 Distant Townscape Benefits - Summary

Height and plan changes have combined to significantly alter how the proposals appear in local and long distance views. The process of refining the massing strategy began with an in depth study of the existing heritage assets in Cambridge and a reassessment of the impact of the scheme. The result of this study was the reduction of 1 storey in height from the taller buildings, Plot 2, 5, 6 and 9.

In response to comments regarding the height, massing and variation of silhouette of the Original Application Scheme, a series of iterative massing redesign studies were conducted to minimise the impact of the scheme in relation to important viewpoints where the proposal is more exposed. The studies took on the following principles to manage the appearance in these views;

- 1 | Initial Massing Principles
- Minimise distant townscape impact by reducing overall height below the horizon line
- Minimise visibility of bulk by reducing lengths of facades at the taller elements.
- Draw the massing envelope away from important heritage assets.
- 2 | Development Massing Principles
 - Create stronger variation in silhouette of the roofscape.
- Ensure the scheme appears as a legible new part of the city that is appropriately harmonious with, or distinguishable from, historic tall elements so as to minimise competition with the historic core and to make legible the evolution of the skyline.

Centering of Mass

The centering of mass pulls the taller elements of the scheme away from neighbouring properties to reduce overlooking and visual impact. Additional to this, the further centering of mass since the Original Application Scheme, helps to create a legible new innovation neighbourood for Cambridge. The centering of mass is focused away from the Historic Core in the townscape views, minimising the impact to individual heritage assets and preventing the scheme from being identified as part of the Historic Core.

Distinct Taller Areas

The taller elements have been reduced in height, length and visibility along the skyline. These sections will be further controlled in the Design Code for high quality design that signifies the Beehive Site as a new innovation neighbourhood.

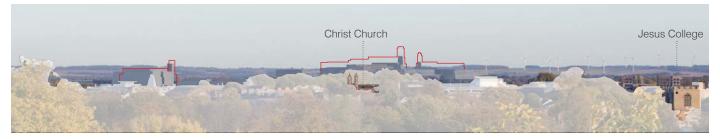
A Varied Skyline

The Original Application Scheme achieved a scooped skyline profile between Plots 2 to 5 which brought benefit to Castle Hill Mound and Coldham's Common viewpoints. The Revised Application Scheme takes a 'rise and fall' approach to the silhouette to form a varied skyline and create points of interest. Both Castle Hill Mound and Colham's Common viewpoints have been improved through reduction in height and articulation.

Castle Hill Mound Design Development



Castle Hill Mound 0 | Original Application Scheme



Castle Hill Mound 1 | Design Development

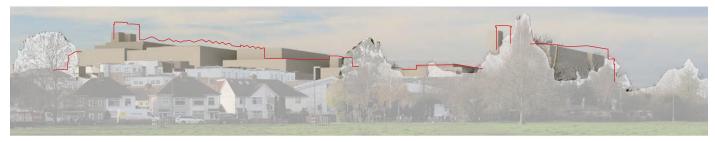


Castle Hill Mound 2 | Revised Application Scheme

Coldham's Common Design Development



Coldham's Common 0 | Original Application Scheme



Coldham's Common 1 | Design Development



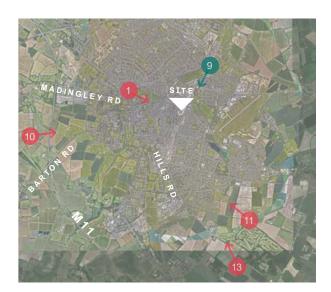
5.6 Massing Changes

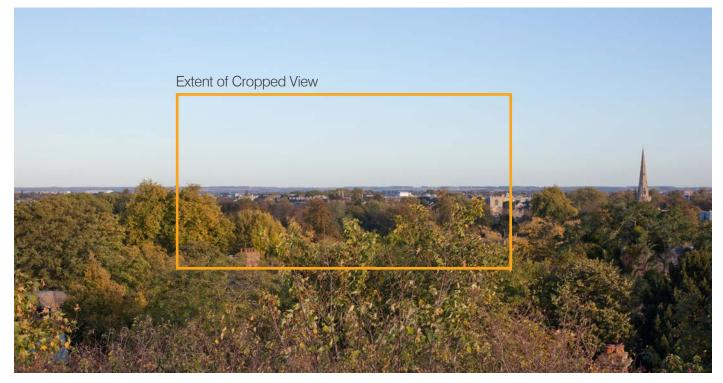
5.7.5 Distant Townscape Benefits - Comparison

The natural topography of Cambridge, being a low city nestled between rolling hills to the east, west and south, means that developments involving taller buildings can be visible from long distances. This is the case for the revised scheme with its tallest roof sitting some 35m above local ground levels. The inclusion of lab fume extract flues on some buildings further increases the potential visibility of the buildings and will be discussed later in this document.

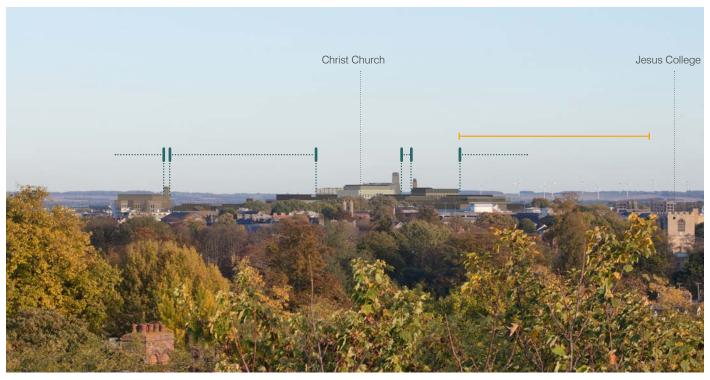
Four viewpoints were selected to test the benefits of the massing changes as the development is most visible in the following;

- Castle Hill Mound (1)
- Coldham's Common (3)
- Red Meadow Hill (10)
- Wort's Causeway (13)





Castle Hill Mound | Existing



Castle Hill Mound | Original Application Scheme



Castle Hill Mound | Revised Application Scheme

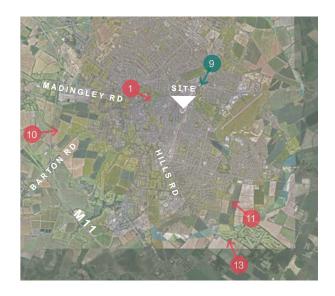


5.6 Massing Changes

5.7.5 Distant Townscape Benefits - Comparison

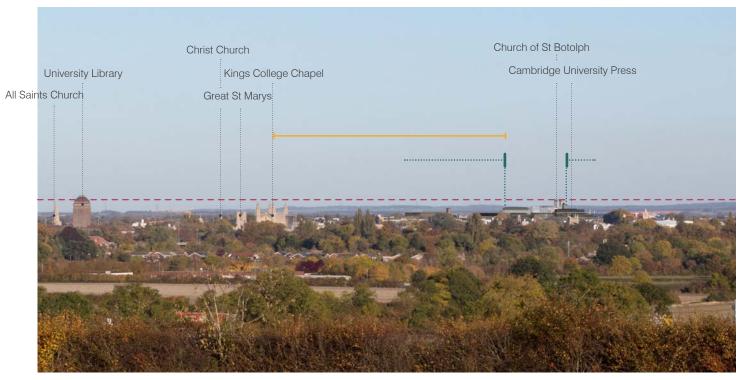
Red Meadow Hill (10)

The Revised Application Scheme benefits in the Red Meadow Hill viewpoint similarly to Castle Hill Mound. The reduction in height has positively reduced the impact on the visible heritage assets in the view, with the maximum height moving below the datum of the University Library.





Red Meadow Hill | Existing



Red Meadow Hill | Original Application Scheme



Red Meadow Hill | Revised Application Scheme



5.6 Massing Changes

5.7.5 Distant Townscape Benefits - Comparison

Wort's Causeway (13)

The Revised Application Scheme has improved the Worts Causeway view by bringing the entirety of the scheme below the horizon line. The variation of the scheme has been developed by breaking down the facades through set-backs, materiality and articulation to create an improved visual appearance of the scheme in this view. These improvements are controlled within the Parameter Plans for massing set-backs and the articulation and materiality within the Design Code.





Worts Causeway | Existing



Worts Causeway | Original Application Scheme



Worts Causeway | Revised Application Scheme



5.6 Massing Changes

5.7.6 Local Townscape Benefits - Comparison

Coldham's Common (3)

The Original Application Scheme followed a scooped skyline principle. The reduced height of Plot 2 in the Revised Application Scheme minimises the appearance of a 'scooped skyline' and instead provides a 'rise and fall' principle, keeping the bulk of the mass to the centre of the site. The massing and facades of Plots 2 to 5 were developed to break down the appearance of the plots and create variation along the Coldhams Common view. Further details on the plot by plot design principles can be found in Section 8.0.





Coldham's Common | Existing



Coldham's Common | Original Application Scheme



Coldham's Common | Revised Application Scheme

- 1 | Reducing Overall Height 3 | Creating Variation

 Original Application Scheme Outline Breaking down facades

 Previous Maximum Height Points of Interest
- ---- Revised Maximum Height

5.7 Urban Greening and BNG Uplift

The Original Application landscape strategy was guided by six core principles, as shown, that have continued throughout the consultation process to create an accessible, welcoming and biodiverse place. The reconfiguration of the movement and spatial framework have led to changes in the urban greening framework, empathising open spaces of varying scales, increasing diverse species and improving strategies for water sensitivity.

The development will aspire to deliver an increase of over 100% Biodiversity Net Gain, exceeding the target of 20% to meet adopted and emerging policy. This will double the baseline value of the existing site providing a diverse and resilient environment for nature to thrive and for the local community to enjoy.

The provision for integration of a variety of sustainable urban drainage features has been established for the Revised Application Scheme, including integration of blue and green roofs, permeable paving and rain gardens to store and treat rainwater. The blue and green infrastructure has been integrated within the Design Code to ensure these strategies are implemented for the whole development. The wetland from the Original Application Scheme has been omitted and replaced with a diverse and resilient large park to the south. This loss of the water feature has been accommodated for with a dedicated Wildlife Area with a nature-focused pond and varied mix of wildlife and wildflowers.

The tree strategy has been revised to propose 8 more trees than the Original Application Scheme to a total of approximately 290 new trees on site. The introduction of the large park to the south will allow for larger tree planting than the Original Application Scheme had the capacity for. This will be described within the Design Code to encourage a variety of trees of different scale and species to promote diversity. The Abbey Grove character area will be another opportunity for dense planting that will contribute to the increase in Biodiversity Net Gain. Section 8.0 gives further information on the Landscape Detail of the development.



Urban Greening Framework



Wayfinding



Play and Leisure



Landscape



Trees



Ecology



Water