

Newmarket Road (Cambridge Retail Park)

This Area of Search is located in close proximity to the historic core. In many strategic views tall development may appear in the immediate backdrop of landmarks in the historic core. From View F, the AOS appears adjacent to the historic core. As such the area is sensitive to greater height.

Overall Summary

- **Scenario A (19m):** Minimal impact, with development largely hidden by tree cover and distance.
- **Scenario B (25.5m):** Generally moderate impact, except in View H, where impact in the northern extent is significant as development becomes visible above the treeline, affecting historic backdrops and rural views.
- **Scenario C (32m):** Significant impact, with skyline changes, obstruction of historic landmarks, and strong urbanisation of rural landscapes.

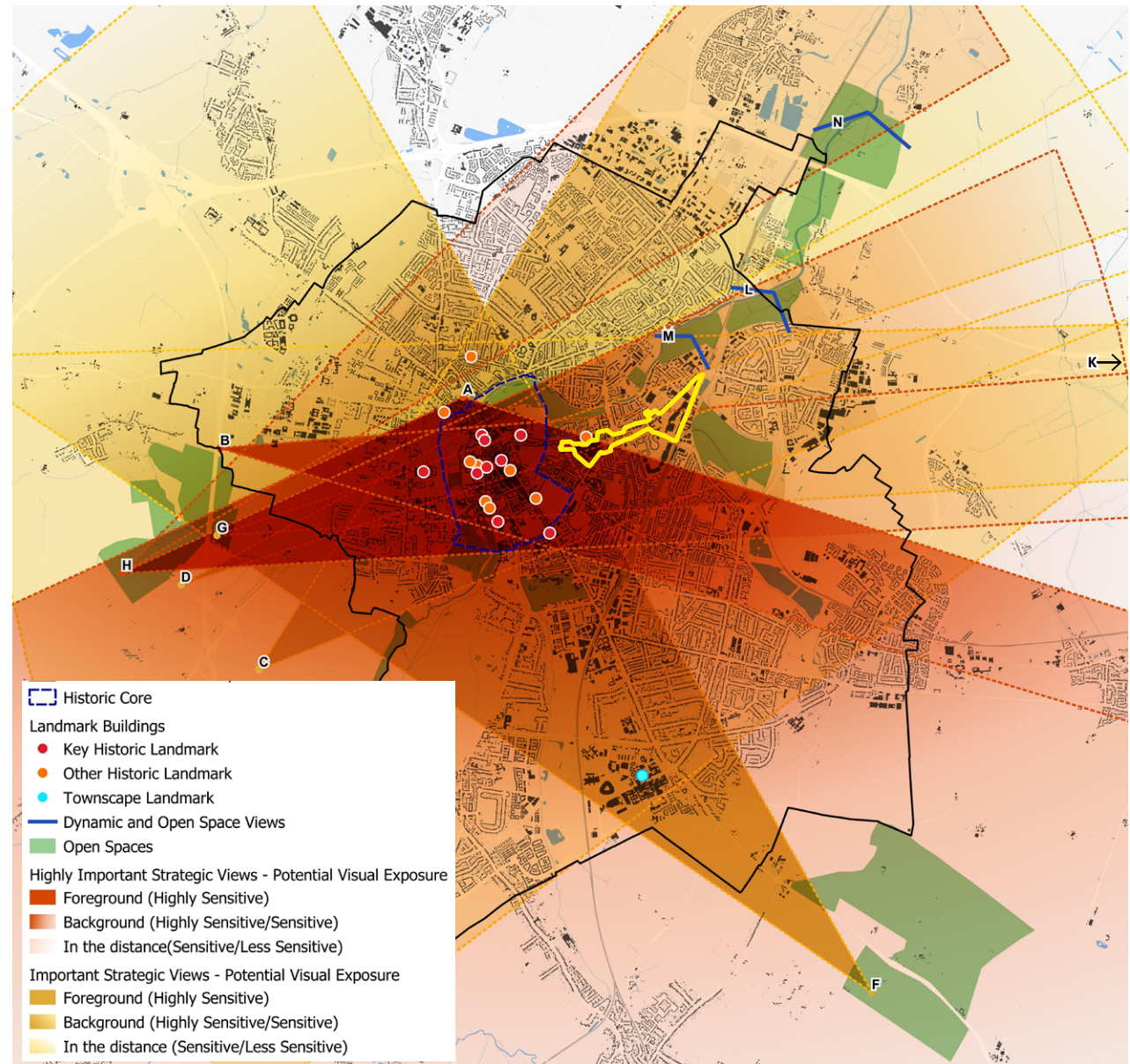
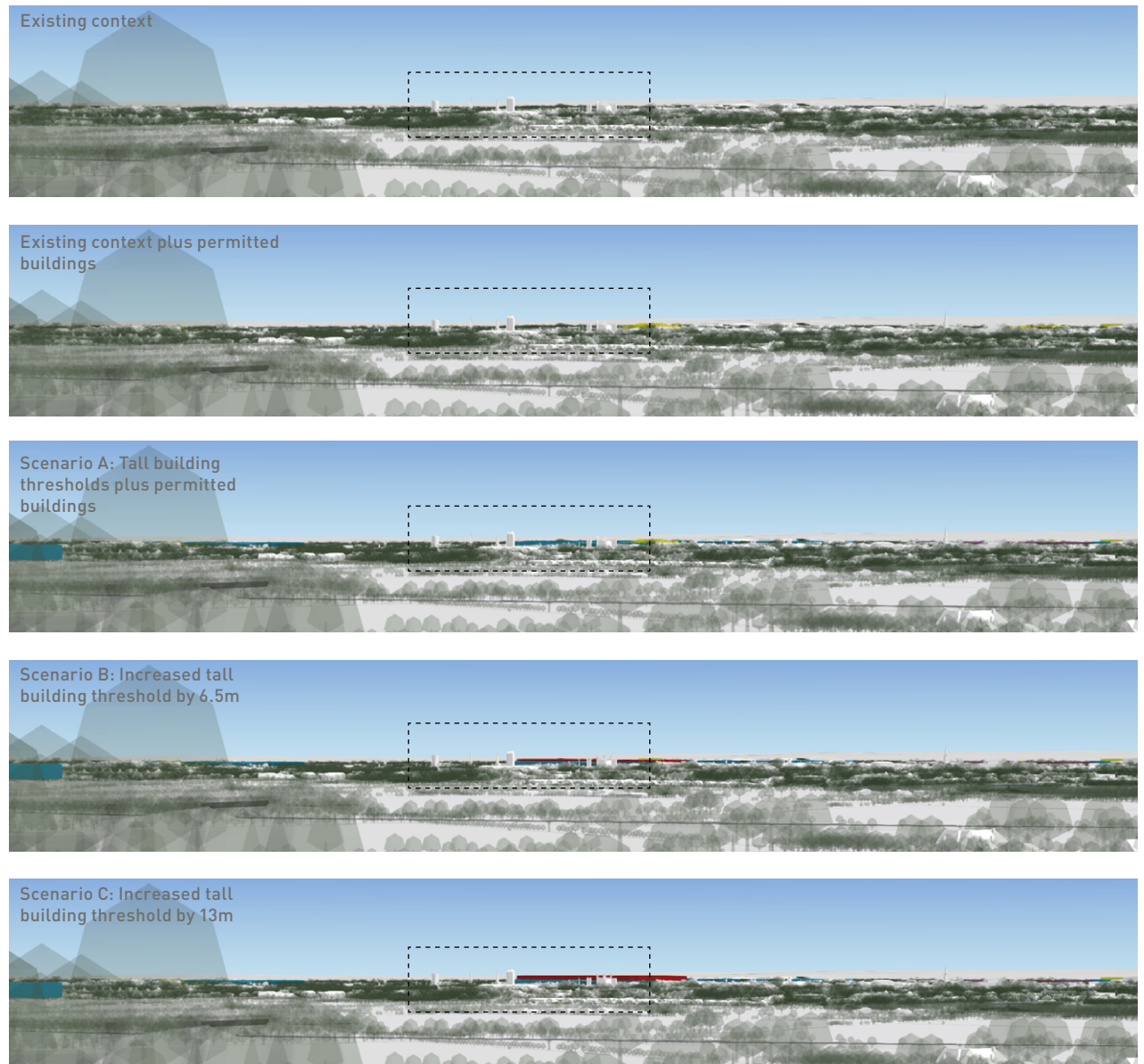


Figure 53: Affected Strategic & Dynamic Open Space Views - Newmarket Road (Cambridge Retail Park)

Recommendations

- Generally buildings of up to the tall building threshold may be acceptable in the area, with the exception of the northern tip of the site where it may cause visual impacts on Stourbridge Common in local dynamic views.
- Buildings above 19m throughout the area of search are likely to have a significant impact on the skyline in strategic and dynamic views, especially in the western and northern parts, and should only be proposed subject to scrutiny to their impacts on the skyline in strategic and dynamic views and demonstrating a negligible effect on the significance and character of these views.
- Buildings above 25.5m are not recommended in the area due to their significant skyline impacts.

Example: Strategic View H - Long range panoramic view



6.5.30 This Area of Search is located to the eastern edge of the city. In many strategic views tall development may appear in the distance behind landmarks in the historic core, a considerable distance away. As such the area is less sensitive to greater height.

- **Scenario A (19m):** Minimal impact, with development largely hidden by tree cover and distance.
- **Scenario B (25.5m):** Significant impact in the northern part of the area, where development may appear in the backdrop of the historic core landmarks (view H) and potentially intrude into dynamic views from the river corridor (View L and N). In view K, development would urbanise the rural landscape context and in the northern and southern extent has an adverse impact on views to key landmarks.
- **Scenario C (32m):** Significant impact in the northern part of the area, where development may appear in the backdrop of the historic core landmarks (view H) and potentially intrude into dynamic views from the river corridor (View L and N). In view K, development could be domineering in the foreground and urbanise the rural

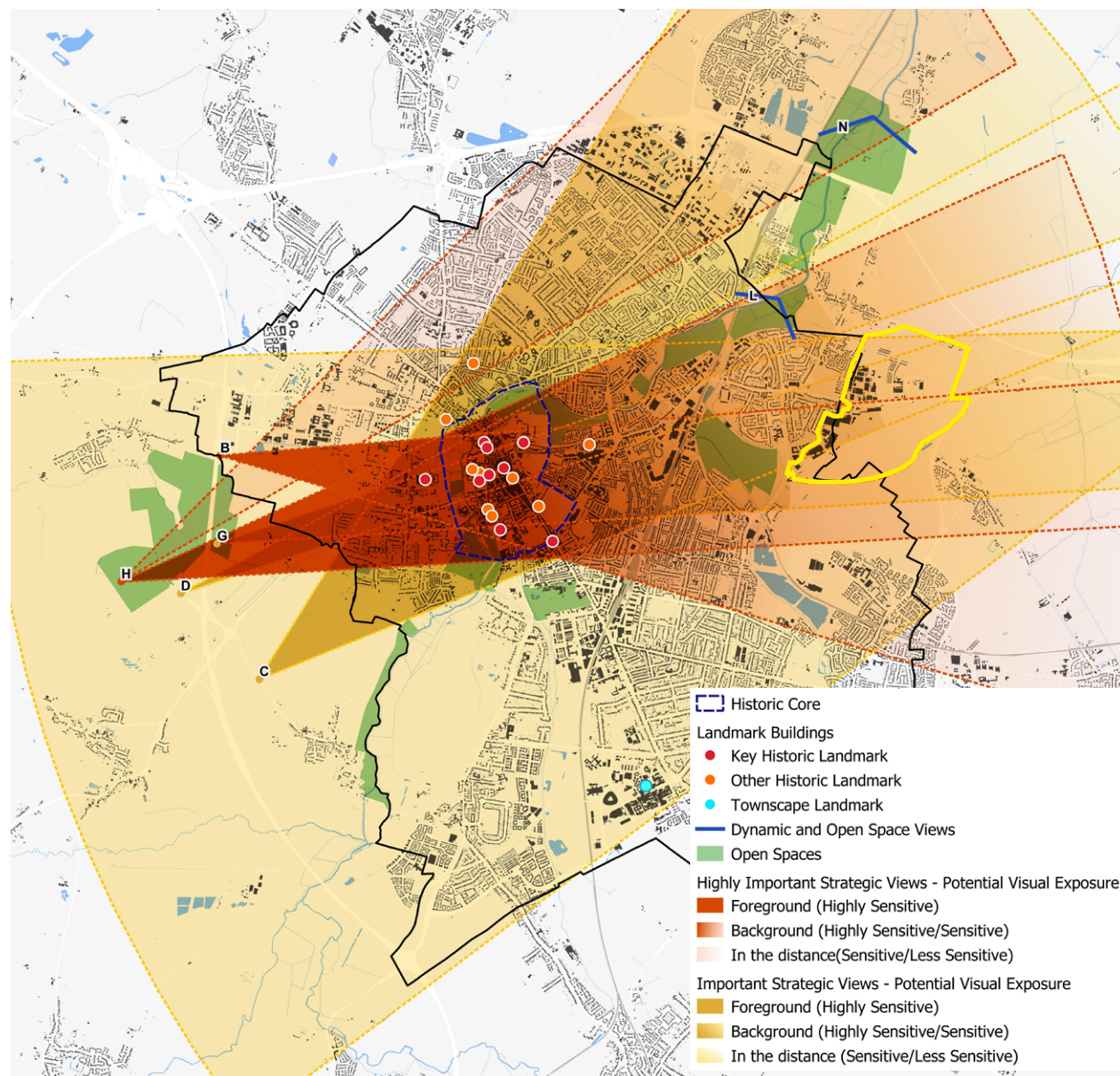


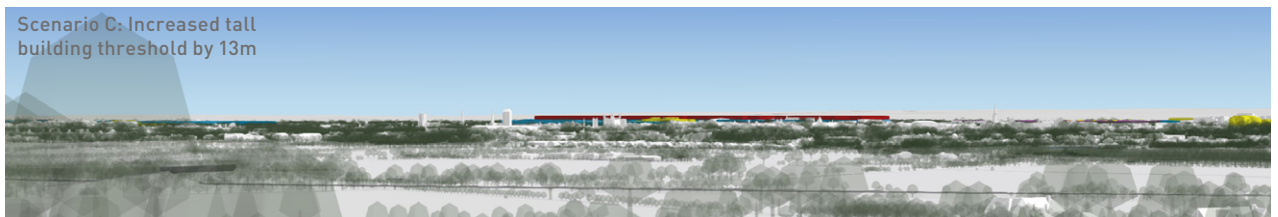
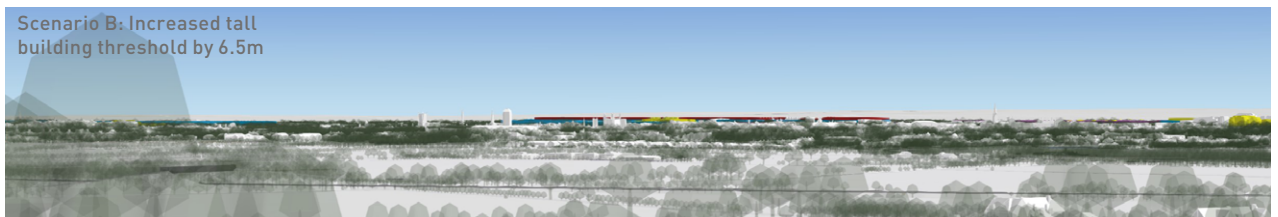
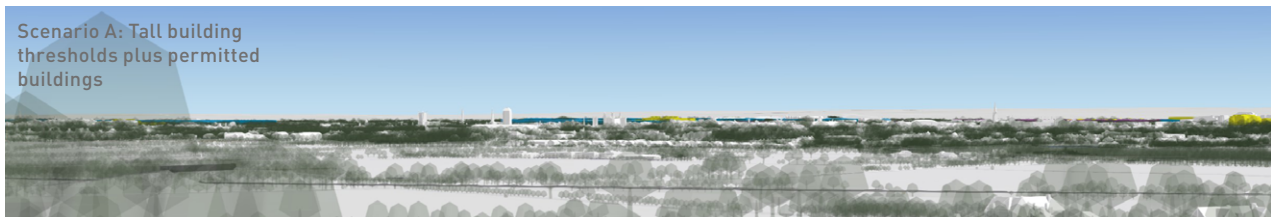
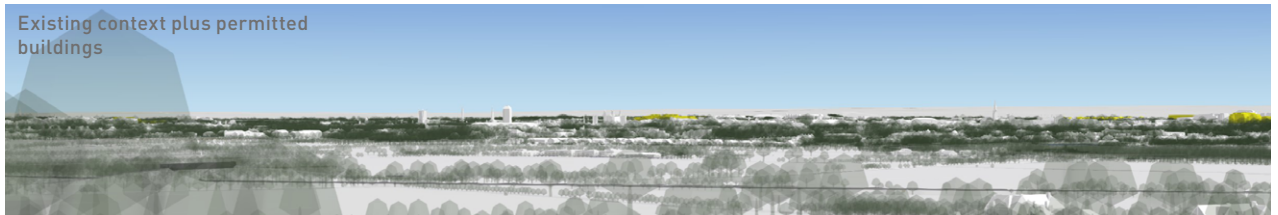
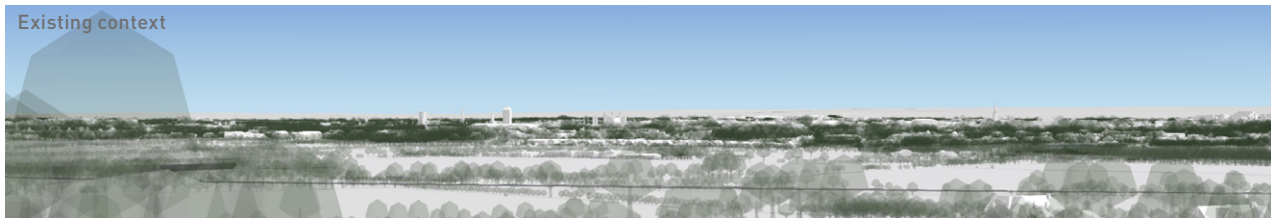
Figure 54: Affected Strategic & Dynamic Open Space Views - East Cambridge (Cambridge City Airport and Marleigh)

landscape context, and detract or obstruct the view to key landmarks.

Recommendations

- No tall buildings in the northern part of the site, where it would become visible behind or in the immediate setting of the landmarks in the historic city centre.
- No tall buildings to block views to the Chimney of the Museum of Technology and the Church of Our Lady in View K.
- Potential opportunity for a carefully managed cluster of taller buildings to create a new distinct skyline feature in the central/southern part of the area of search, marking East Cambridge on the skyline and serving as a locally meaningful centre for the emerging neighbourhood.
- Top heights should not exceed 32m to avoid over-dominating the skyline, and the majority of taller buildings should be well below this height.
- General height should step down towards the open landscape interface of the area (north, east and south), and tall buildings should be situated behind a buffer of a minimum of 100m from the edge of the area.

Example: Strategic View H - Long range panoramic view (Highly Sensitive)



West Cambridge (Cambridge Institute of Manufacturing and Schulmberger Research Institute)

6.5.31 This Area of Search is located at some distance to the west in relation to the historic core. In many strategic views from the east tall development may appear in the backdrop of landmarks in the historic core. In views from the west, tall development may dominate the foreground of panoramic views, and detract from the view to the historic centre, yet without physically interfering with views to landmarks directly.

Overall Summary

- **Scenario A (19m):** Significant impact along the southern boundary and in the south eastern corner of the site (Views B and H), where development may detract from the setting of the city centre and the rural character of this view. In other parts of the area of search the impact is negligible.
- **Scenario B (25.5m):** Significant impact along the southern boundary and on the eastern side of the area of search (views B, H, J, I, O and P), where development may affect the landscape character or detract from the setting of the historic city centre landmarks. A moderate impact of development is noted for other parts of the area, where development may affect the wider setting of the city in the landscape.

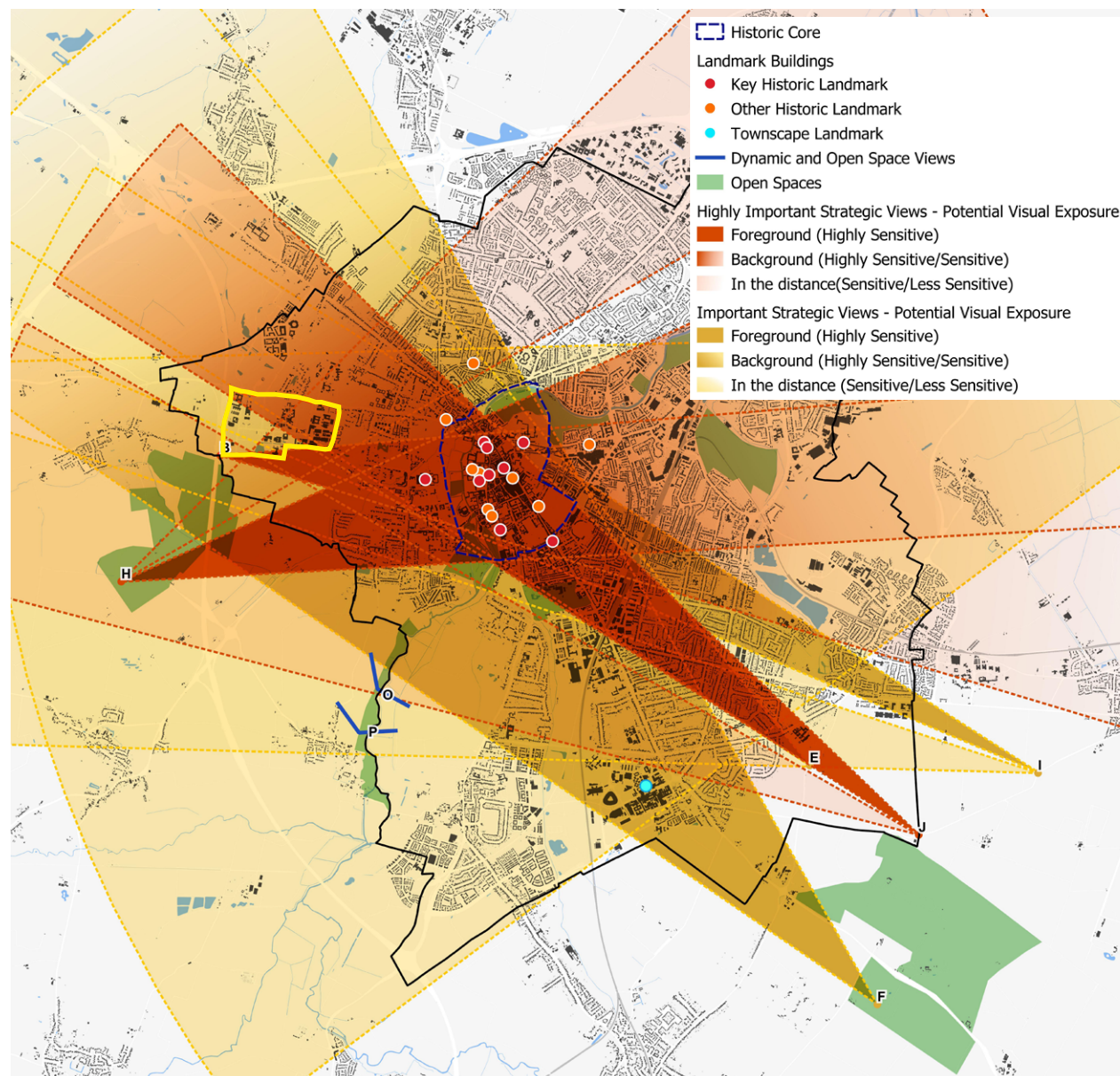


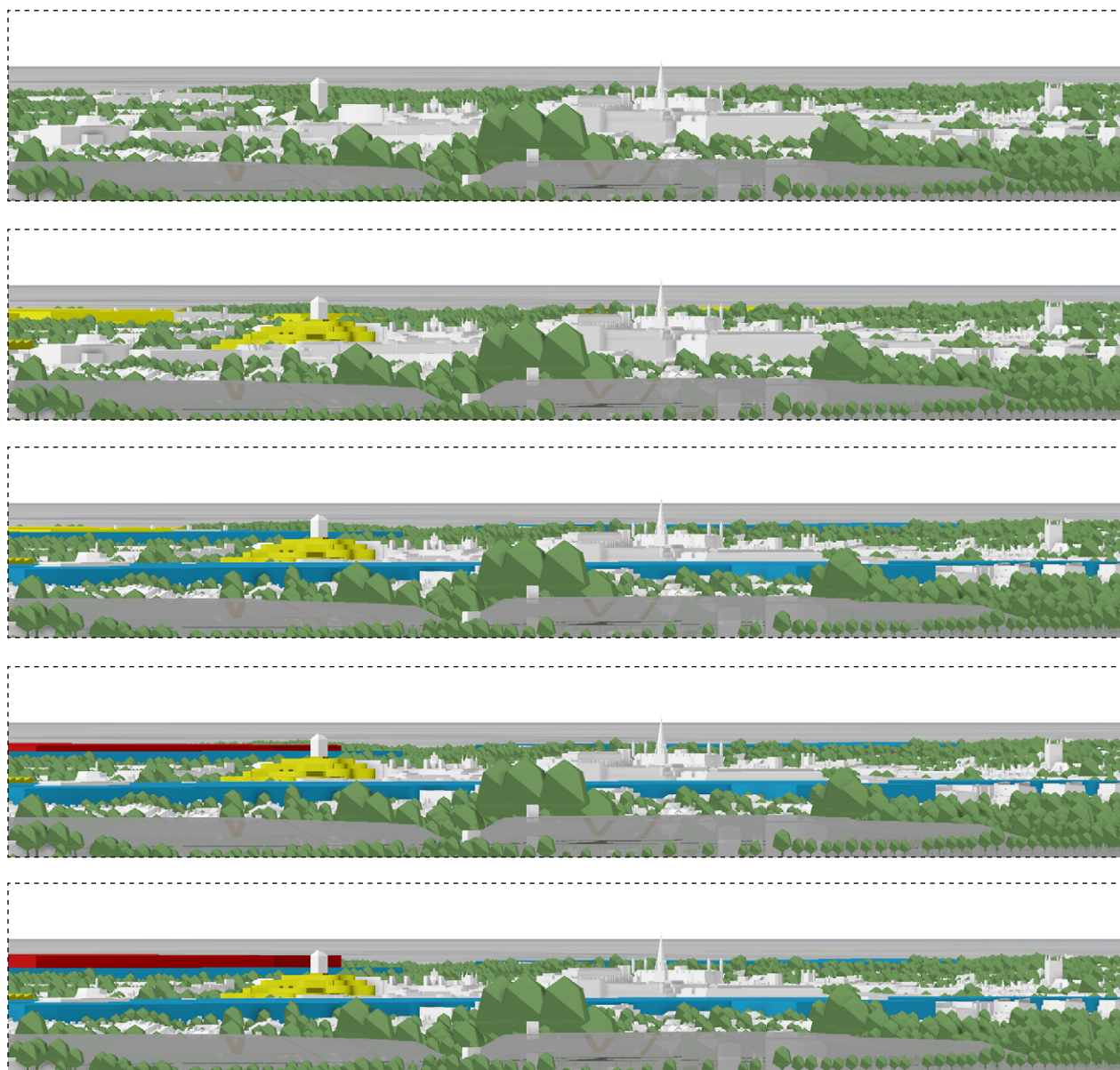
Figure 55: Affected Strategic & Dynamic Open Space Views - West Cambridge (Cambridge Institute of Manufacturing and Schulmberger Research Institute)

- **Scenario C (32m):** Significant impact across the entire area (views B, H, J, E, F, I, O and P), where development may detract from historic landmarks, dominate the backdrop to the city, interfere with the horizon line and erode the rural setting of the city.

Recommendations

- Heights up to the 19m tall building threshold may be acceptable in the area of search with the exception to the south eastern corner of the area of search.
- No tall buildings should be promoted within 100m of the boundary of the Area of Search with the open landscape.
- No tall buildings (above 19m) should be promoted in the eastern half of the site.
- In the western half, buildings should not exceed 25.5m, subject to testing in views.
- Heights should generally step down towards the edge of the Area of Search with the countryside and not exceed 13m on the edge. Note that this area is covered by consented massing parameters in Outline 16/134/OUT that permit a few local highpoints slightly above the broad height recommendations established by this study.

Example: Strategic View J - Magnified view onto the historic core



Addenbrooke's Hospital and Cambridge Biomedical Campus

6.5.32 This Area of Search is located at a considerable distance to the southeast of the historic core. The development appears in the foreground of panoramic views from the south east to the city centre. The site is also in the backdrop of the view from Castle Mound.

Overall Summary

- **Scenario A (19m & 25m):** Moderate impact caused by 19m development in the urban expansion area urbanises the rural setting of the city.
- **Scenario B (25.5m & 31.5m):** Development of 25.5m height in the urban expansion area may have a strong urbanising effect on the rural landscape setting of the city (views F and Q). The 31.5m height in the existing campus may have a moderate impact in some views (A, K) by consolidating silhouettes of existing tall buildings.
- **Scenario C (32m & 38m):** Development of 38m in existing campus creates a dominant skyline cluster and detracts from historic core landmarks. Development of 32m in the expansion area has a domineering urbanising effect that clashes with the rural setting and landscape character.

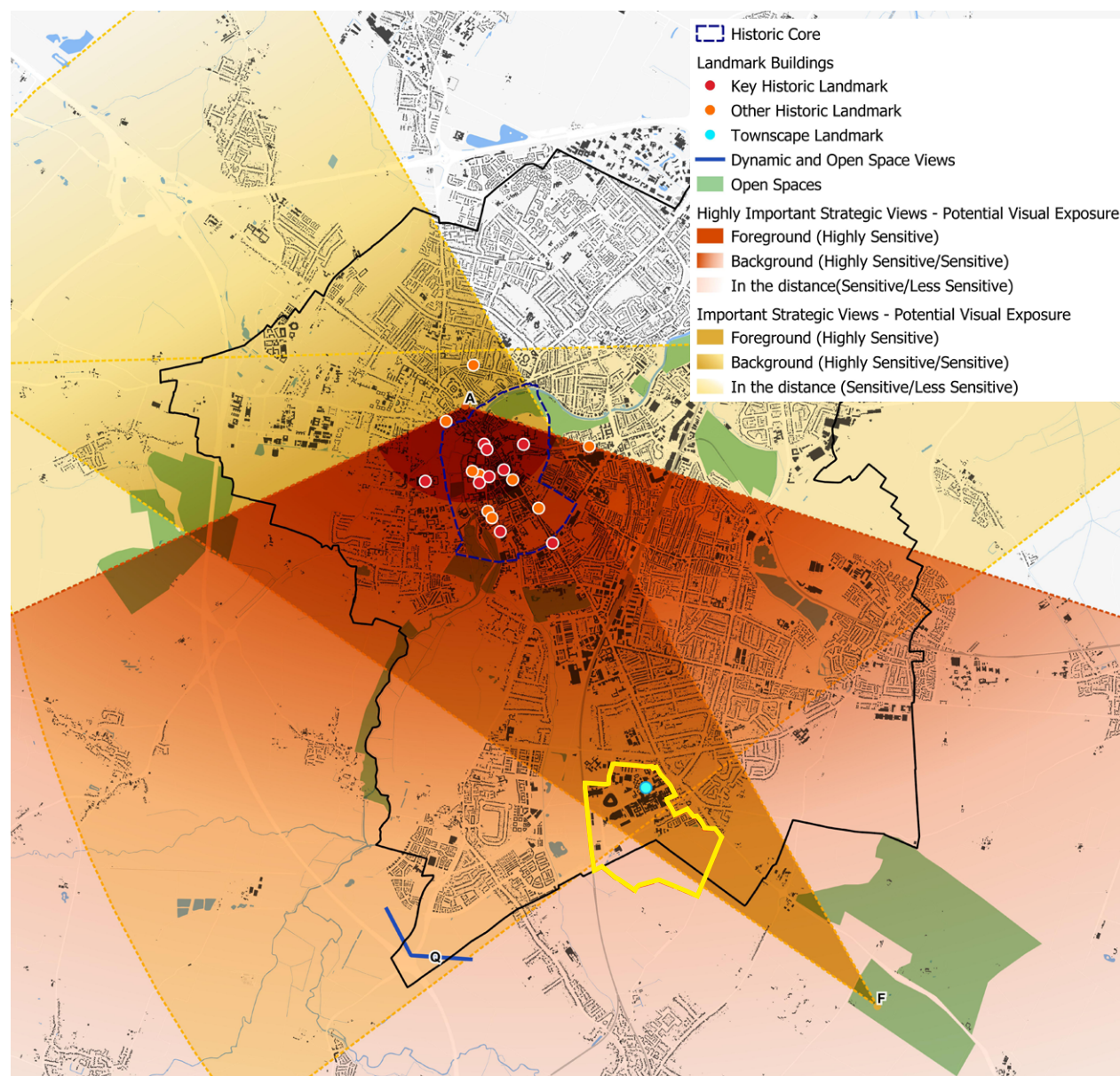
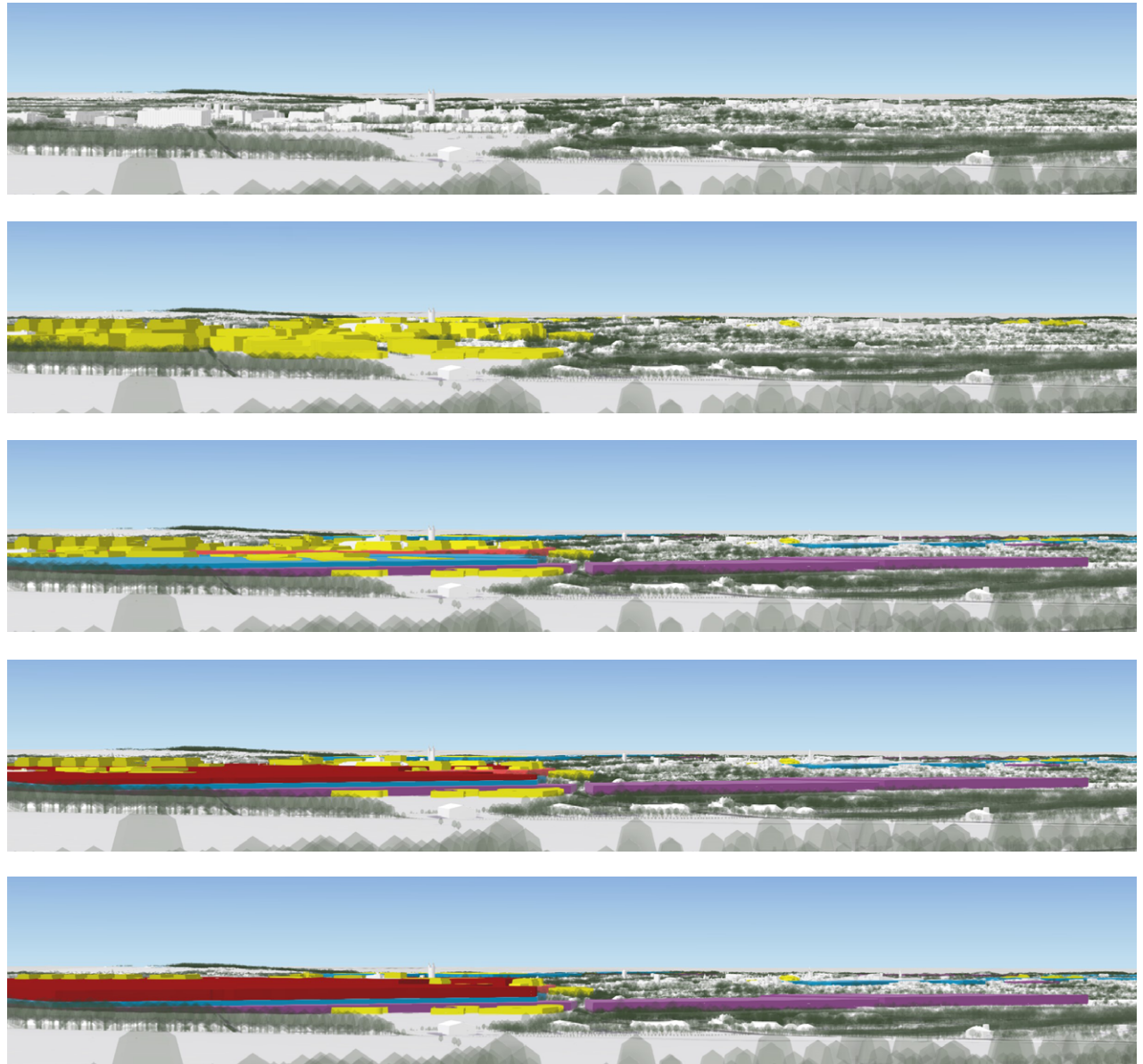


Figure 56: Affected Strategic & Dynamic Open Space Views - Addenbrooke's Hospital and Cambridge Biomedical Campus

Example: Strategic View F - Very Long range panoramic view - Sensitive

Recommendations:

- Tall buildings up to 31.5m in the Addenbrooke's existing campus may be acceptable.
- Building height in the extension area should generally remain below the tall building threshold of 19m.
- Tall development in this area should only be considered in close proximity to the existing concentration of height around the Addenbrooke's campus, where it would blend in.
- The creation of a separate cluster of tall buildings in the expansion area is not recommended due to its proximity to the open landscape and the domineering impact it could have on the landscape character.
- Towards the settlement edge, heights should step down, and a smaller urban grain should be considered to appropriately interface with the rural context.
- Large-scale and uniform massing at the settlement edge or on the skyline should be avoided, and the massing of buildings should be appropriately broken down and articulated.



Northeast Cambridge

This Area of Search is located at a considerable distance northeast in relation to the historic core and may appear in the backdrop of views from the southwest. Given the distance the area is less sensitive to greater height in strategic views. However, the site is situated at the edge with the river corridor and the open landscape, and sensitivity arises from dynamic and approach views of the rural urban interface.

Overall Summary

- **Scenario A (19m):** Development near the eastern edge of the area (View L) will have a strong urbanising effect that detracts from rural character of the river corridor. Moderate impact may be observed (View N) with development on the northeastern edge where it may be visible in-between trees.
- **Scenario B (25.5m):** Development near the eastern edge of the area (View L) will have a strong urbanising effect that detracts from rural character of the river corridor. Significant impact may be observed (View N) with development on the north eastern edge having an urbanising effect on the river corridor.
- **Scenario C (32m):** Development around Cambridge North Station may have an impact on the setting of the historic core in

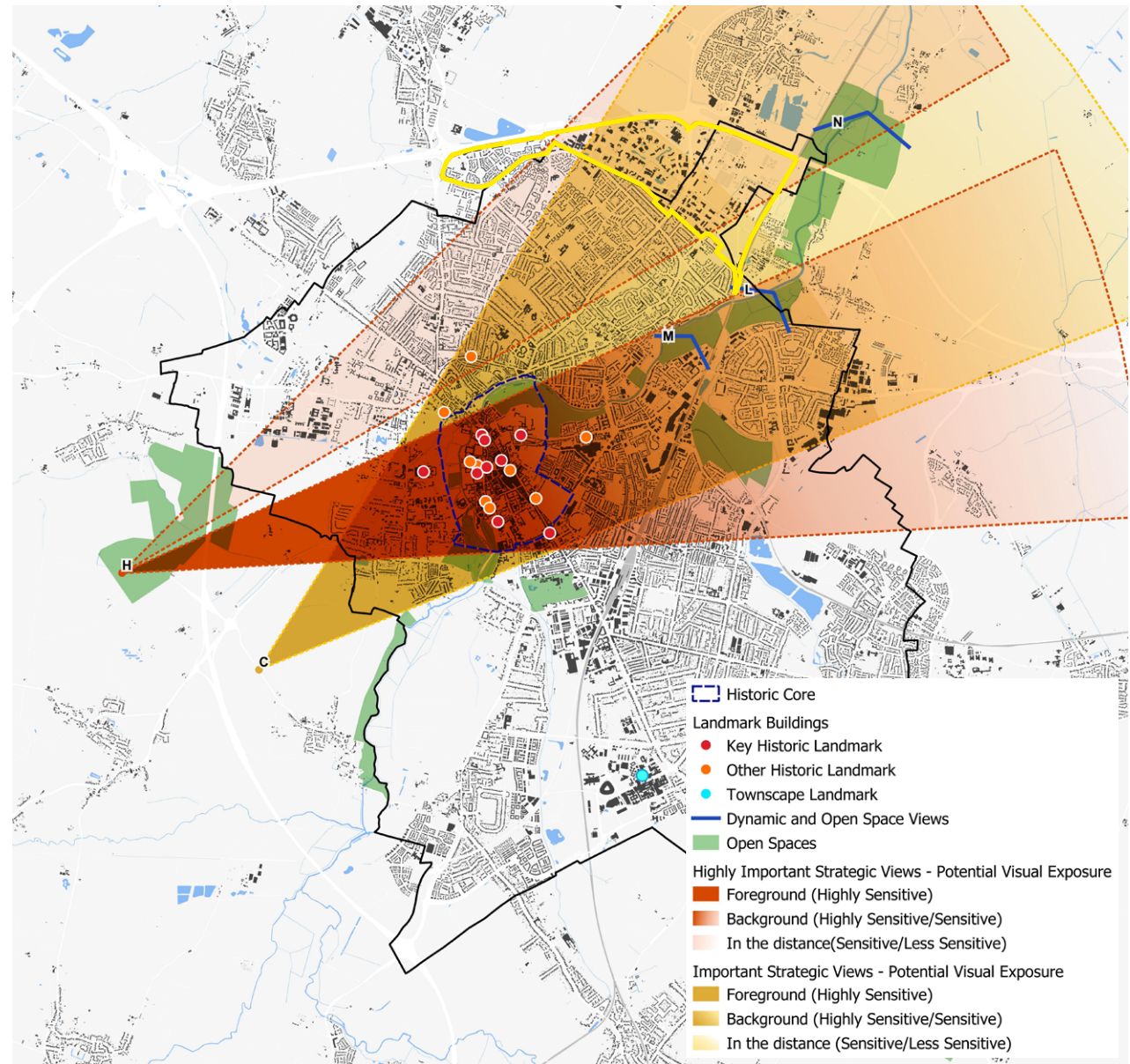


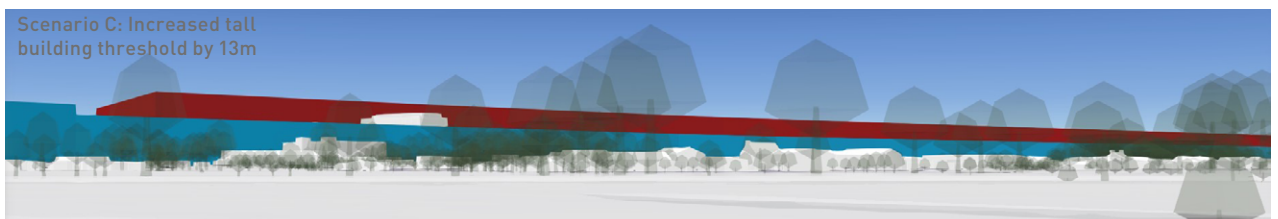
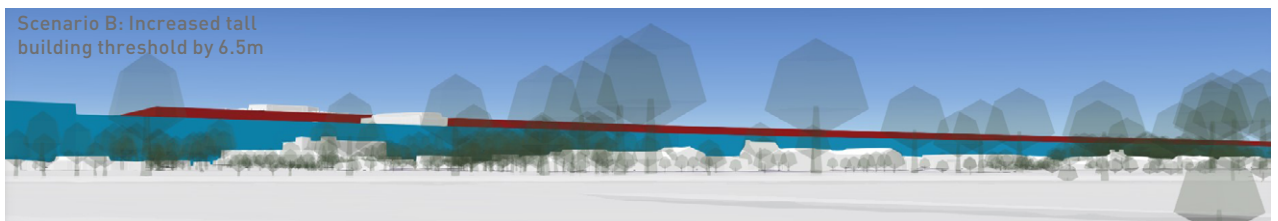
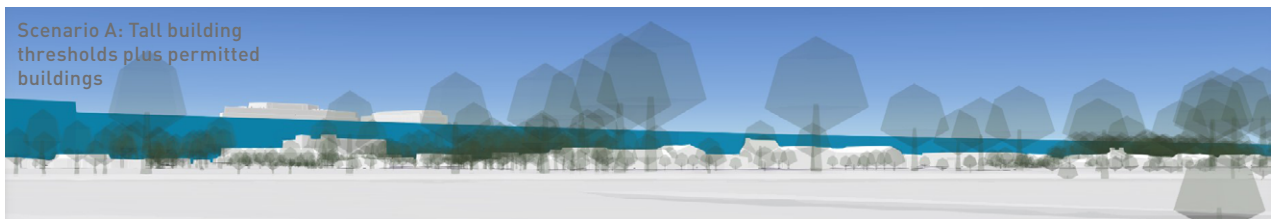
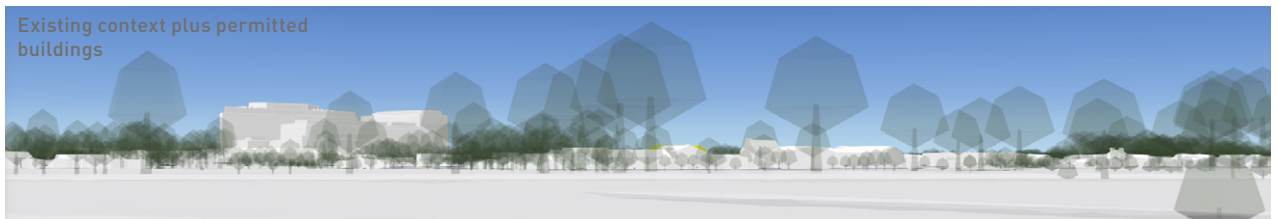
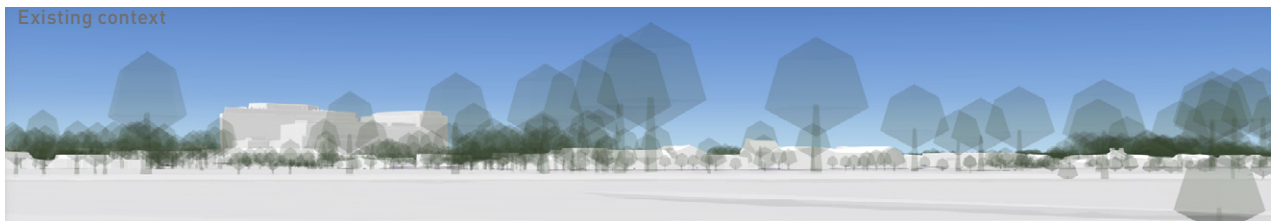
Figure 57: Affected Strategic View Cones

view H. Development near the eastern and northern edges of the area (View L and N) will have an overwhelming urbanising impact on the rural character of the river corridor. A significant impact may also be observed in View M from development along the southern edge of the area.

Recommendations:

- Development along the southern, eastern, and northern edge of the area should not generally rise above the tall building threshold of 19m unless fully tested and justified.
- No more than 13m on the eastern interface with the railway to allow for a gradual built-up of height and avoid stark contrast with modest small-scale development in the river corridor.
- Located well away from the edges is a potential opportunity for carefully managed taller buildings (cluster or marking nodal points) with a new skyline representative of the growth area.
- Tall buildings should not exceed 32m, but opportunity exist for one or two landmark buildings exceptions of slightly greater height in city-wide significant, central and meaningful locations.
- Testing of individual and cumulative impacts is critical to avoid adverse impacts on the rural landscape setting.

Example: Dynamic View L - Ditton Meadows



6.5.4 Conclusion

6.5.33 This chapter has set out a proactive approach to tall buildings that aims to direct taller development to appropriate locations.

6.5.34 A siftings approach has identified 39 areas of search, of which 19 are situated in and around Cambridge and 20 in South East Cambridgeshire, which may have the potential to accommodate tall(er) buildings, subject to impact testing. For clarity, the fact that these areas are identified as potential locations for tall buildings does not mean that they will be appropriate.

6.5.35 Six significant areas of search in Cambridge have been reviewed, and visual testing of broad tall building scenarios was undertaken. This has identified a number of sub-areas that may have greater potential for tall buildings, subject to testing and comprehensive planning. These are indicated in Figure 58.

6.5.36 Three locations (in North East Cambridge, East Cambridge, and the Adenbrooke's and Bio-Medical Campus) are identified where central clusters of tall buildings of up to 32m (10 residential

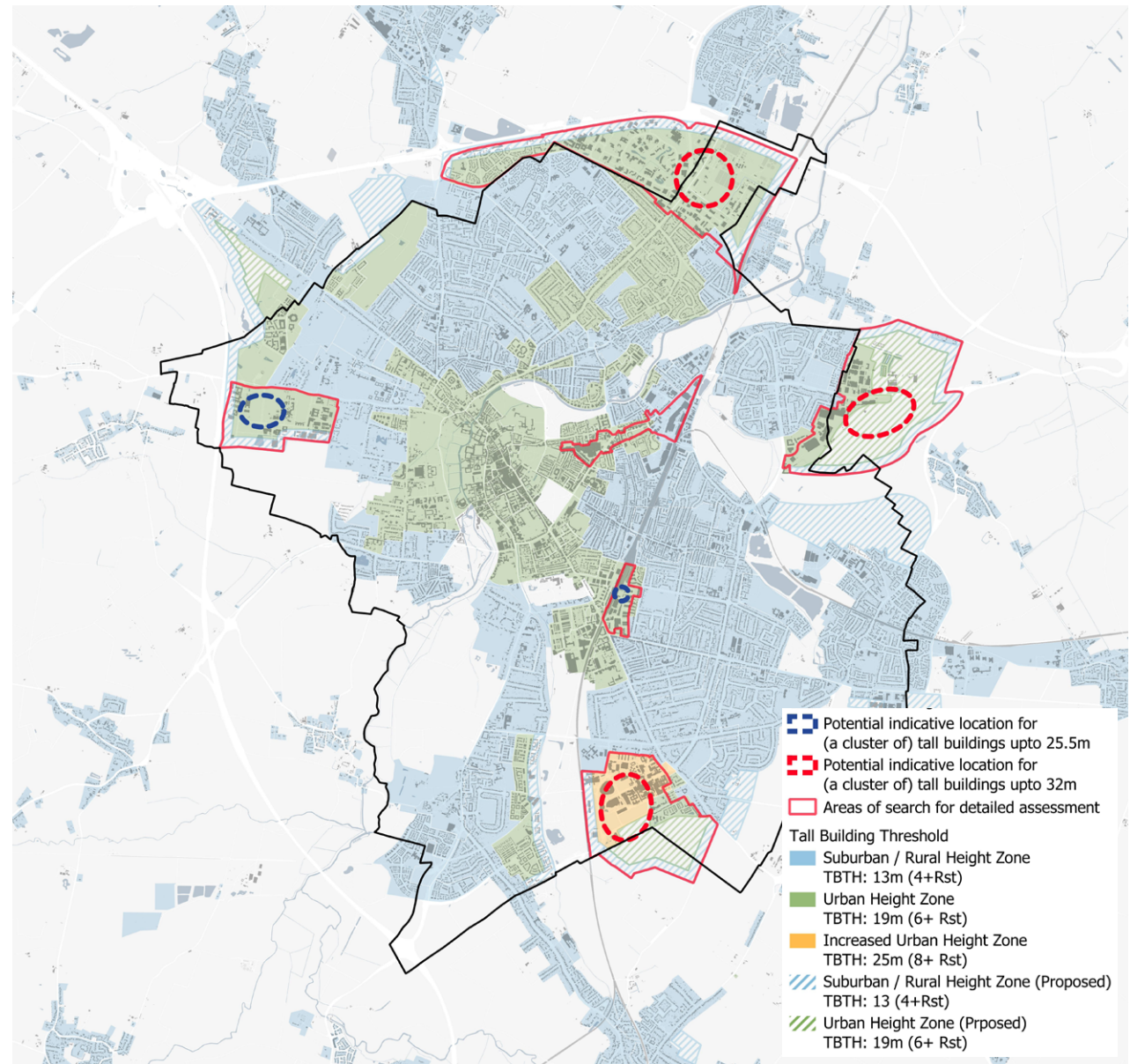


Figure 58: Potential areas with propensity for tall buildings

storeys) may be appropriate. In North East Cambridge and East Cambridge, there may be further opportunity for one or two central landmark buildings that are slightly above this height and that, with distinctive architecture, mark the respective district on the skyline.

6.5.37 Two further locations are identified that offer opportunities for buildings up to a height of 25.5m. These are in the central western portion of West Cambridge, and a small location east of Cambridge Station.

6.5.38 This study has not tested the tall building potential of other areas of search. However, the testing has shown how sensitive the skyline is to intrusion by buildings of greater height, especially in locations close to the historic city centre. In many views and locations, even buildings that are only marginally higher than the relevant tall building threshold were found to have an adverse effect on Cambridge's characteristic skyline, and views to and the setting of heritage landmarks. As such, it is likely that there will be only a few to no opportunities for tall buildings on the

remaining areas of search, considering their skyline impact.

6.5.39 The testing has shown that even in locations where there is potential for tall buildings, the heights will need to be moderate, and in many cases, not rise above 32m or even 25.5m.

6.5.40 Testing has also confirmed that the Tall Building Threshold is effective in tested areas of search in preserving Cambridge's cherished skyline characteristics. This means that, generally, in areas of search, development up to the height of the tall building threshold is not expected to have a significant adverse impact on the skyline.

6.5.41 The assessment has further highlighted the sensitivity of the rural edge of Cambridge to tall buildings, both at the interface with the open countryside and the river corridor. Long views over open spaces mean that taller buildings may rise above the vegetation and tree belts, contrast with the undisturbed landscape character, and detract from the rural setting of the city. The introduction of buffers along the settlement edge with lower

height and no tall buildings may help to avoid or minimise this urbanising impact. The concept of buffers has already been incorporated into the tall building threshold zoning map (see Figure 58). Any tall building should be proposed centrally to sites and well away from sensitive edges.

6.5.42 With the sizable number of areas of search in Cambridge, there is a risk that an overly permissive and uncoordinated approach to tall buildings could lead to a fragmented skyline, crowded by height accents, that weakens the perception and standing of the unique ensemble of historic landmarks in the city centre. The cumulative effect of existing, permitted, and planned tall buildings on the skyline should be carefully studied and managed.

6.5.43 No sites have been tested outside Cambridge in the south eastern part of South Cambridgeshire. However, given the significant landscape, townscape and heritage sensitivity of the district, the potential for tall buildings will be limited and should be subject to stringent criteria as set out below.

Recommendations

6.5.44 Tall buildings in Cambridge should be directed to areas with potential for tall buildings as identified in Figure 58. Other areas of search could have the potential for tall buildings, subject to comprehensive visual and other impact assessments, albeit this is less likely given the sensitivity of the skyline.

6.5.45 Locations outside of the identified Areas of Search are unlikely to be appropriate for tall buildings except in highly exceptional circumstances and will need to be assessed on a case-by-case basis.

6.5.46 Any proposed tall building or buildings in an area of search (or in exceptional circumstances elsewhere) will need to demonstrate successfully that:

- 1 It is part of a comprehensively planned development that contributes to social, economic, and environmental development and regeneration, and is of significance for the entire city or sub-region that justifies any resultant change and impact on the skyline;

- 2 There is a convincing justification for the proposed tall building(s) in respect of their functional, placemaking, or legibility role for their immediate and wider location, and alternatives have been explored and discarded; and
- 3 Each tall building has been fully tested in respect of its visual, heritage, townscape, and landscape impact (see Section 6.4) and appropriately mitigated its impact. Development must demonstrate significant and tangible planning benefits to outweigh any harm to protected assets and the skyline.

6.5.47 Tall building proposals should not come forward in isolation. They should be part of or respond to a coordinated approach to height and locations of taller buildings for an area. The approach to height should be established through a masterplan or framework process that has undertaken the necessary cumulative impact testing of tall buildings with the use of the GCSP digital model and established appropriate mitigation measures.

6.5.48 Parameters for height and locations of tall buildings should be coordinated and agreed by the Local Authority through an outline planning permission with appropriate parameter plans or an adopted planning framework. Where applicable, they should respond to the specific height guidance provided for the above six areas of search identified in Section 6.5.3 Testing of major areas of search and associated Appendix D, as well as the criteria set out in paragraph 6.5.46.

6.5.49 Generally, tall buildings should be concentrated in discrete areas or clusters, so as to minimise their impact on the skyline and wider character of the city. Singular tall buildings or buildings in central cluster locations should be designed as special landmark buildings, to create distinct markers for wayfinding and orientation, both on the ground and on the skyline.

6.5.50 Tall development should further comply with additional guidance on design and the integration of tall buildings with their local context, which is provided in the next chapter.

7 Skyline and Tall Buildings Guidance

7.1 Introduction

7.1.1 This chapter provides general design guidance to complement the strategy.

7.1.2 The first section covers guidance on the management of the visual impact and the skyline. Its focus is to provide design principles aimed at helping development to integrate well and mitigate effectively their impact on the skyline.

7.1.3 The second section covers design principles specific to tall buildings, their expression and articulation, and how they best integrate with their context.

7.1.4 The third section sets out the application requirements and processes that would be expected from any development of greater height in Greater Cambridge.

7.2 Managing visual impact and the skyline

7.2.1 Preserving a green skyline

7.2.1 Trees are a dominant feature on Cambridge's skyline as the majority of buildings in the city remain well below the treeline. This gives the city skyline a unique green and soft appearance. Historic landmarks are often the only notable urban features that stand out above a 'sea of green'. This image is reinforced by Cambridge's flat topography, modest building heights and significant mature trees and vegetations especially on the river and in open spaces, and also by the fact that most strategic views across the city are from shallow high points across the roofscape rather than obliquely from above.

7.2.2 There is a risk that taller development (even below the tall building threshold) will rise above the treeline and become visible across the city. Cumulatively this would have an urbanising effect on the skyline and detract from Cambridge's unique character. Further, new development on green and brownfields sites that lack existing green cover or buffers, may become visually prominent and exposed in views and also undermine the green setting and rural interface of the city.



Figure 59: Greening in between and around buildings with trees, that when mature will provide a canopy up to or above the height of new building can assist in preventing an urbanisation of the skyline

Principle 1: Green skyline

7.2.3 Development in Greater Cambridge should actively contribute to reinforcing the green character of the city and countryside by providing extensive green cover, planting and semi-mature trees around buildings and in buffers with open spaces and the countryside. Greening and tree planting is especially important in areas where tall buildings are proposed, where development sites are exposed to open space, and where a site lacks existing mature trees.

7.2.4 Greening should use native deciduous species that when mature will provide a canopy up to and above the height of new buildings. Care should be taken to provide sufficient space and appropriate conditions to trees to enable a healthy and mature growth.

7.2.5 Development should retain all existing mature trees. In exceptional circumstances where retention is not feasible, replacement with new semi-mature trees should be provided to adequately compensate for the loss of tree canopy, both in terms of visual character and environmental value.

7.2.2 Responding to Cambridge's characteristic roofscape

7.2.6 Traditional pitched and gabled roofs dominate much of Cambridge, reflecting the historic architectural styles of the colleges, residential areas, and public buildings. These roofs often feature clay tiles, slate, or lead with muted colours, which lend the roofscape a consistent and timeless appearance. Many older buildings, particularly the colleges, have tall and decorative chimneys, which add vertical accents to the roofscape. These chimneys often feature intricate brickwork, reflecting the craftsmanship of the time. In essence Cambridge's roofscape is characterised by a coherent pattern of fine grain buildings, a modest variation in roof forms and heights, a pattern of vertical accents, and muted grey and brown colours.

7.2.7 The varied roofscape blends in well with the city's tree cover, which together create a soft and layered effect where nature and roof-scape intertwine. Jointly this balanced and calm skyline forms the backdrop to iconic structures, such as

King's College Chapel and other landmarks that have steeply pitched roofs with lead cladding, complemented by ornate pinnacles and spires, which serve as focal points on the skyline.

7.2.8 Modern buildings with large unarticulated massing, flat roofs, long continuous lines, undisguised roof-plants, contemporary materials or bright colours will contrast with Cambridge's prevailing roofscape and stand out dominantly on the skyline, in particular where they are visible in-between the tree cover or above the treeline. Cumulatively they can affect the coherence and detract from the special character of Cambridge's skyline, especially when they are seen in views towards the historic core.

Principle 2: Roofscape

7.2.9 The roofscape of any higher or tall development should blend harmoniously into Cambridge's skyline and generally apply the following principles:

- through their architecture and form express the top part(s) / storey(s) of a building as distinct to the main body;
- provide articulation and variation to the form of the top storey, break larger mass into smaller more varied constituent parts, and avoid long uninterrupted horizontal lines and bland uniform forms;
- for background buildings (e.g. those not intended as exceptional significant landmarks) apply sympathetic materials and muted contextual colours to the upper parts of the building - particularly where it is outstanding or tall. Bright, contrasting, or reflective surfaces should be avoided;

- discretely integrate solar panels, lift overruns, plant rooms, flues, exhaust stacks, cranes, telecommunication and other equipment within the overall envelop of the building. They should be a constituent part of the architectural expression. This can be achieved for example by screening equipment behind parapets, or articulating exhausts stacks as deliberate vertical architectural features.
- Avoid feature lighting to the top of a building and curtail excessive light emission from large areas of glazing at the top/roof level of buildings to avoid detracting from principal landmarks especially in the city centre in hours of darkness. The exception to this may be a development that is deliberately designed as a landmark.



Figure 60: Development should with their architecture and form express the top part(s) / storey(s) of a building as distinct to the main body



Figure 61: Development should provide articulation and variation to the form of the top storey, break larger mass into smaller more varied constituent parts, and avoid long uninterrupted horizontal lines and bland uniform forms



Figure 62: Development should discretely integrate solar panels, lift overruns, plant rooms, exhaust stacks, cranes, telecommunication and other equipment within the overall envelop of the building. They should be a constituent part of the architectural expression. This can be achieved for example by screening equipment behind parapets, or articulating exhausts stacks as deliberate vertical architectural features.

7.2.3 Preserving Cambridge's setting and relationship with the landscape

7.2.10 The edge of the urban area with the surrounding landscape (and open parts of the river corridor) is characterised by landscape features, such as trees, hedgerows and vegetation which screen the urban fabric and reinforce the rural and natural setting of the city. Traditional development at the edge is lower and more dispersed in scale and intensity. This adds a peaceful, picturesque quality to Cambridge as a city embedded in and connected with the landscape. Usually little urban development is visible above and through the green vegetation buffer from the surrounding countryside. The same applies to smaller existing settlements in South Cambridgeshire.

7.2.11 There is a risk that new development of greater height or without significant landscape screening may intrude in views from the open landscape and detract from the rural setting of the city or other settlements and harm the landscape character.

Principle 3: Settlement edge

7.2.12 Generally, development at the edge of Cambridge City or around smaller existing settlements in South Cambridgeshire should reinforce the traditional natural setting of the settlement as embedded within the landscape. This typically requires the following design responses:

- Development close to, or abutting, open countryside should be of modest height and screened from view through the use of existing or newly planted green buffers, trees, or other vegetation.
- Built form near the settlement edge should generally be of a smaller grain and/or feature well-articulated massing. Larger buildings should be broken down into smaller volumes, incorporate a varied roofscape, and be interspersed with trees to soften their impact.
- Building height should increase gradually with distance from the settlement edge

(where appropriate). The aim is to achieve a layered visual composition in views from the countryside, where foreground vegetation and lower buildings help to screen and soften the presence of larger buildings set further back. Prominent or contrasting massing that rises above the treeline, field boundaries, vegetation, or copses should be avoided.

7.2.13 However, there may be instances, particularly in the context of comprehensively planned large-scale new settlements, where a different relationship with the surrounding landscape can be explored through a robust masterplanning process. This process should be informed by landscape impact assessments and follow a clear placemaking approach.

7.2.14 In such cases, it may be appropriate to establish a more urban settlement edge or to introduce exceptional landmark

7.2.4 Landmarks to provide a proportionate, meaningful and distinctive addition to Cambridge's skyline

buildings in key and strategically impactful locations. Nevertheless, the broader impact on landscape character must be fully understood, and overbearing or starkly urban design responses at the interface with the rural countryside should be avoided.

7.2.15 Even where a larger scale of development at the settlement edge is justified, it should be softened and partially screened by appropriate planting. A layered approach to height and scale should still apply, with lower buildings at the edge and increased height set further back, where appropriate.

7.2.16 Historic landmarks, such as church spires and college chapels, particularly King's College Chapel, are the most prominent features on Cambridge's skyline. Their verticality contrasts with the predominantly horizontal cityscape, drawing the eye upward. Many colleges, such as Trinity and St John's, contribute to the skyline with their towers, domes, and ornate parapets, symbolising the city's academic prominence.

7.2.17 The ensemble of historic landmarks in Cambridge's city centre create a harmonious and memorable skyline. Individual landmarks are architecturally elaborate, elegant and highly distinctive. They tend to be instantly recognisable on the skyline and associated with the academic or spiritual institution they represent. They are symbols of the city's heritage, culture, and intellectual legacy, assist with orientation and wayfinding and contribute significantly to Cambridge's character and identity. A few modern landmarks such as the chimney

of Addenbrooks and the chimney of the Museum of Technology, similarly are visually distinctive and clearly mark a place of civic and functional significance in the city.

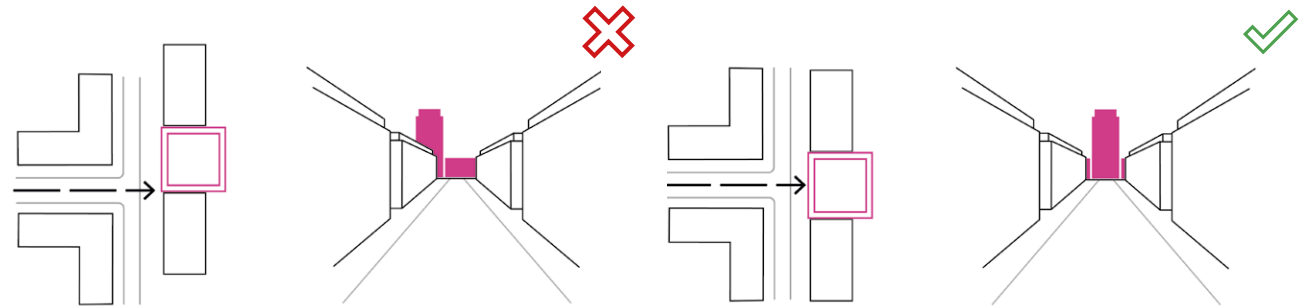
7.2.18 Tall buildings due to their greater height and visual prominence can perform the role of 'landmarks'. A single exceptional tall building will stand out from its surrounding context, and naturally be a notable visual marker in its environment. Inevitably it will become part of the mental map of an area, and people use it as reference points for orientation and wayfinding. It also will enhance the recognisability and distinctiveness of a place, simply by virtue of its contrasting height. As such tall buildings can be used as positive townscape design features, to help improve the legibility of an area, mark activity hubs, points of interest or civic facilities. Landmark buildings can emphasise a location in views from further away, help orientation, visually reinforce significant places in the urban hierarchy, and contribute to local identity.

Principle 4: Landmark Tall Buildings

7.2.19 Any single tall building in Cambridge that is notably higher than its surrounding context and makes an imprint on the city skyline should be considered a landmark. Where tall buildings form part of a cluster, this principle may apply only to those that are visually exposed, taller, or otherwise outstanding in character, rather than to all buildings within the cluster (see Section 7.2.5 on Clustering for further detail).

7.2.20 Given the sensitivity of Cambridge's skyline, tall building landmarks should be highly exceptional developments. They must be strongly justified and meet all of the following criteria:

- Demonstrate a clear and meaningful role in the local townscape and skyline by marking a place of higher-order significance in the city, such as a centre, transport hub, or academic, cultural, or commercial institution.



Tall building positioned without regard to vista

Tall building central focus in vista

Figure 63: Landmark tall buildings should be located in vistas from approaching routes - examples of mid-rise and high-rise tall buildings

- Be proportionate in height, form, architectural expression, and skyline impact to their role and significance within the wider city context.
- Be located in a visually prominent position, such as a public space, key street corner, or vista, in order to enhance legibility and amplify visual presence.
- Deliver architectural and urban design of exceptional quality, offering a distinctive identity both locally and on the skyline.
- Carefully consider both individual and cumulative impact (in relation to other permitted or proposed developments) on the skyline, demonstrating that the

proposal will not detract from existing landmarks or from the coherence of the historic landmark ensemble in the city centre. It should avoid skyline fragmentation, visual crowding, or inappropriate clustering outside identified cluster locations.

- Respond sensitively and appropriately to Cambridge's heritage, townscape, and landscape context, with full regard to identified sensitivities and constraints.

7.2.21 Landmark tall buildings should be treated as exceptional cases, not as a default design aspiration.

7.2.5 Clustering / coordinating the location and height of tall buildings

7.2.22 As set out before in the strategy, the historic character of Cambridge's skyline is one of relatively few taller buildings that emerge as 'incidents' above the prevailing lower buildings and trees. By and large these are historic landmarks concentrated in the city centre, that reinforce the image of a city of dreamy spires and colleges. In the recent decades two clusters of tall buildings have emerged on the skyline, Addenbrooke's Campus and the CB1 Station Area, both asserting their presence on the skyline and exemplifying how Cambridge's skyline can evolve into the future.

7.2.23 Modern development especially in growth areas will continue to promote greater heights for commercial and efficiency reasons. This poses the risk that tall buildings emerge on the skyline that are poorly coordinated, which may lead to a fragmentation and increasing urbanisation of the skyline, and potentially a degradation of existing skyline characteristics and qualities.

7.2.24 This strategy recommends an approach that directs tall buildings to areas of search, and in some cases cluster locations within them.

7.2.25 Clustering of tall buildings is an effective way to manage the impact of tall buildings on the skyline, as it confines tall buildings in clearly defined geographic areas. It avoids the scattered effect of tall buildings that are spread out over large areas and the resultant fragmentation of the skyline. Clusters however are more visually prominent than single tall buildings and therefore need to be proactively planned for and managed.

Principle 5 - Clusters of Tall Buildings

7.2.26 Areas identified as having potential for tall buildings should establish a coordinated approach to building height and the location of tall buildings through an appropriate planning framework or masterplan.

7.2.27 The impact of clustered or otherwise coordinated tall buildings on the skyline must be fully understood and actively managed. As part of the masterplanning process, 3D testing of height and massing scenarios should be undertaken, from strategic, dynamic, and local viewpoints in all directions, to evaluate how proposed development will:

- Affect the skyline;
- Retain and enhance the visual primacy of historic core landmarks;
- Create an appropriately scaled and aesthetically coherent skyline ensemble that distinctively marks and represents the district or location on Cambridge's skyline.



Fragmented and uncoordinated skyline

Figure 64: Tall building clusters

7.2.28 Height frameworks for cluster or tall building areas should be informed by and respond to the following design principles:

- A cluster is most legible and distinct on the skyline when the tallest building(s) is/are positioned at the visual centre, with other buildings stepping down in height towards the edges. This creates a layered form and helps mediate the relationship between the cluster and its surrounding context.
- Cluster areas should be geographically compact and not spread excessively in all directions. This compactness ensures that the cluster can be appreciated as a cohesive form from multiple viewpoints.



Coordinated skyline with cohesive cluster

- Taller buildings within a cluster should vary in height to create a dynamic skyline and to avoid a uniform or monotonous massing at the maximum allowable height.
- The cumulative impact of tall buildings must be carefully assessed. Care must be taken to ensure that tall buildings within a cluster do not visually coalesce in key views, as this can diminish legibility and have a significant negative impact on the skyline.
- Clusters should avoid merging into one another and should express clear 'valleys between peaks', creating

notches in the skyline that enhance visual separation and clarity.

- Both clusters and individual landmarks should contribute to a clear hierarchy of places on the skyline, reflecting the relative significance of different locations and functions within the city and the wider Greater Cambridge area.

7.3 Design guidance for tall and large-scale buildings

7.3.1 Contextual development

7.3.1 Tall development should respond to and integrate well with the city's inherent townscape characteristics. Integration can be achieved through various means, often requiring multiple strategies that complement each other. These may include:

- Responding to the form and defining attributes of the street space;
- The creation of (intermediate) lower rise elements or podium blocks;
- Building elements with their massing and grain responding to the scale of the area;
- Expression of a coherent parapet or roof line and building frontage, often setting back the taller element can be a way of successfully managing scale and massing;
- A sympathetic pattern of facades and fenestrations; and
- Architectural appearance that with its detailing, colours, and materiality, responds sensitively to the local colour and materials palette.

7.3.2 Comprehensive development

7.3.2 Tall buildings in Cambridge should not come forward in isolation but be part of a comprehensive, vision led and coordinated plan for change in an area. Tall buildings should have a special townscape and /or functional role within their development that is commensurate to their height.

7.3.3 Tall buildings, especially with smaller footprints, may benefit from being part of a larger street or podium development, which can better integrate with the urban fabric, internalise servicing and parking requirements and avoid blank frontages to the surrounding public realm, which can be difficult to achieve with a standalone tall building due to its often limited footprint.

7.3.3 Mediate with their neighbours

7.3.4 If poorly sited, tall buildings, due to their height, may strongly contrast with existing smaller scale neighbours and affect the coherence of Cambridge's urban fabric.

7.3.5 Tall buildings should avoid any stark contrast in scale and height with surrounding existing or new development. Development should mediate with the lower-rise context for example by introducing intermediary built form that creates a visual stepping-down towards neighbouring buildings. Alternatively development can create a sufficiently large buffer space to create a visual break and separation.

AVOID STARK CONTRASTS

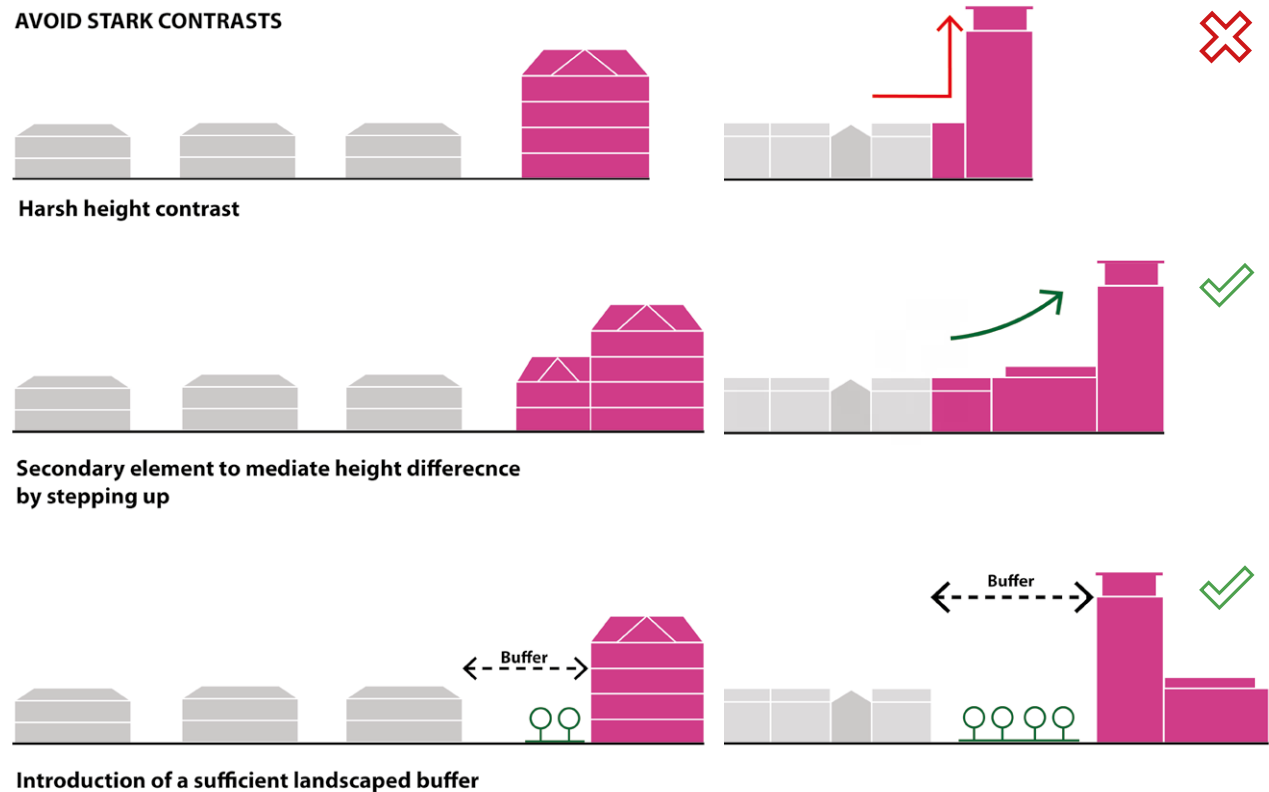


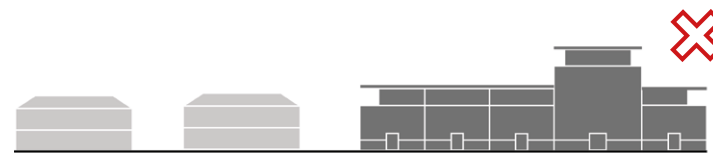
Figure 65: Avoid stark contrast in scale and height - examples of mid-rise and high-rise tall buildings

7.3.4 Mix of uses

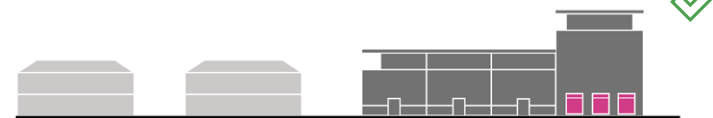
7.3.6 Tall buildings by virtue of their height denote centrality and an intensity of activities. Generally tall buildings should deliver a mix of uses with active ground floors that will generate footfall, animate the surrounding area and contribute to a vibrant place.

7.3.7 Subject to context and location, tall buildings could also offer a meaningful facility for the wider public that corresponds to the sense of civic importance expressed through its height in the townscape. For example, this could include retail, leisure, cultural, community, health, or other civic uses at ground levels, with other uses above, responding to the needs of an area.

LANDMARKS SHOULD BE MEANINGFUL



Residential building without legibility function



Mixed use building at street corner

LANDMARKS SHOULD HAVE ACTIVE GROUND FLOORS



Figure 66: Tall buildings should deliver a mix of uses with active ground floors

7.3.5 Architectural design

7.3.8 Tall buildings typically become highly visible features on the skyline. Therefore they should be of exceptional architectural design.

7.3.9 Tall buildings should express and discretely articulate their constituent three parts: the base, the middle and the top of the building. Simple and bland extrusions of the building footprint or uniform and repetitive facades are not acceptable.

7.3.10 The base of a tall building comprises the lower storeys, and its relationship with the street space, providing definition and animation through the formation of a well defined plinth to the building. Special attention should be given to an appropriate and legible articulation of the building entrance, the internalising of servicing and parking arrangements, the avoidance of blank frontages, and the distribution of uses to provide animation and overlooking to the street space.

7.3.11 The middle section of a tall building usually comprises of the main

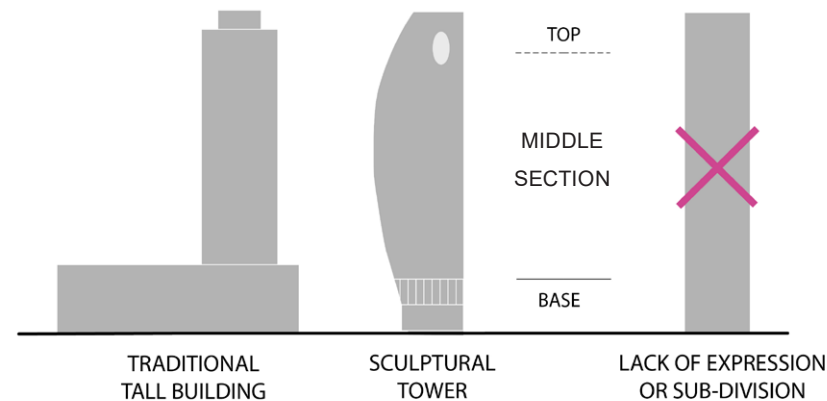


Figure 67: Compositional elements of a tall building

vertical element and largely determines the prominence of the building, its effect on neighbouring amenities and the microclimate. The middle section should be well articulated, and design should consider protruding or recessed elements, balconies, open and closed surfaces, and different materialities. The aim is to help articulate the middle section, create a sense of verticality and break up large bulk into smaller more sympathetic and elegant forms and volumes.

7.3.12 The top of the building includes the uppermost storey(s), including the roof and roof equipment. The top should be designed as a special element - a distinctive “crown”, considering its form and

articulation, massing and/or materiality. The top is the main visible element of a tall building on the skyline, and like with historic landmarks should be distinct and recognisable in views across the city.

7.3.13 The townscape and skyline impact of a tall building is not only caused by its height, but also by its scale and form. For example, the extrusion of a large footprint (such as Cambridge Airport Hangars), or a slab block that is longer than wide, is likely to have a greater impact on the urban landscape, than a tall building with a smaller footprint that is similar in depths and widths. Tall buildings of greater height and especially landmark buildings should generally be designed to express

elegance, proportionality and verticality in a form that is consistent from every angle. This includes views from the street perspective, including towards the underside of projections or balconies. To that end, slab-like tall buildings and large bulky forms should be avoided.

7.3.14 Through careful detailing and choice of materials, tall buildings should age well and be designed for longevity, while relating to the character of their location. Design should consider the following design principles:

- Façade design should be varied and respond to their role and position in the building
- High quality façade materials, such as masonry, should be utilised as they are more durable and offer greater longevity.
- Rooftop plant space should be integrated into the building design and should be well-concealed. Balconies

should be integral aspects of the building design and not appear as later additions. The underside of balconies are highly visible and poor balcony design can detract from the overall quality of a tall building.

- The choice of materiality and the palette of colours should assist in visually weaving the new building into its established surroundings, or, where appropriate, provide a contrast.

7.3.15 It should be noted that some tall buildings, such as those within the identified clusters, should act as background or secondary buildings rather than competing with one another, hence the need for cumulative impact studies.

7.3.6 Contributing to well defined, human scale and animated streets

7.3.16 Landmarks and other very tall buildings, when situated poorly within a street space, can create a sheer wall of height rising up from the ground and feel overbearing. The design of a proposed tall building should always consider how the building responds to its surrounding spaces, affects the sense of street enclosure, demonstrate adequate daylight and sunlight impacts, and responds to the human scale. A tall building can mitigate its impact on adjoining streets by either moving back from the prevailing building line behind a plaza space, or by situating the taller element on top of a podium or street block that provides the defining building mass in the street space and thereby minimises the impact of its height.

7.3.17 Developments should respond to the scale of surrounding streets and spaces, their sense of enclosure and the quality of the ground floor experience.

7.3.18 The height and massing of the development needs to consider how

Location of the building in street space

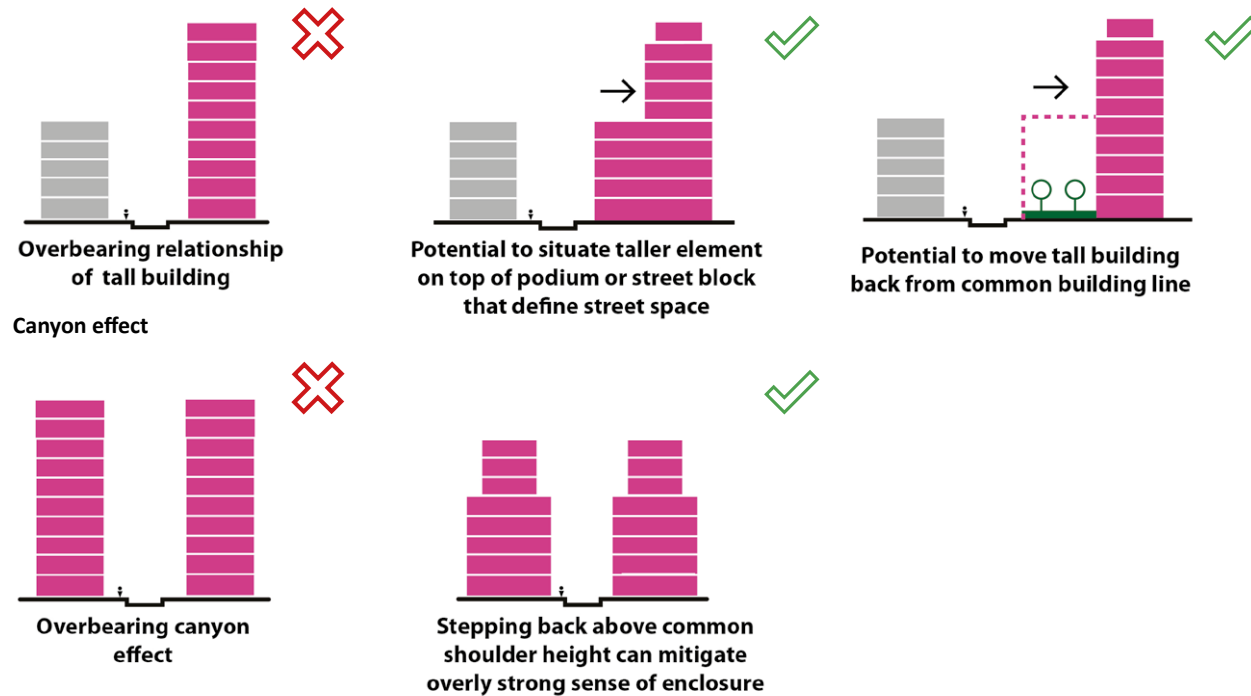


Figure 68: Avoid an overbearing relationship with the street space

the tall building element is integrated to prevent it from feeling overbearing on surrounding streets, and existing and new developments.

7.3.19 Excessive enclosure or the creation of a ‘canyon’ effect should be avoided, for example by applying set-backs to effectively limit the visual impact of greater height on the street space.

7.3.20 As a focal point of activity and footfall, tall buildings should provide active uses at ground level to contribute positively to the animation, overlooking and quality of the surrounding street space.

7.3.7 High Quality Public Realm and Public Space Provision

7.3.21 Tall buildings need to have sufficient space at their base to allow for greater levels of footfall and also to provide an appropriate and proportionate setting to the building. Tall buildings that are set back from the plot edge can also help to limit the level of enclosure in the street space or open space.

7.3.22 The expected design quality of a proposed tall building should extend to the public realm around the building. This should provide a proportionate setting to the building. It should be inclusive and of high quality, and consider the provision of pedestrian amenities, tree planting, soft landscaping, seating, lighting and public art, and delivering a design that reflects the prominence of the building in the area.

7.3.23 Trees and other landscape elements can help to soften the environment, mitigate the impact on the skyline, reduce the environmental impact of a tall building on the street space and can also contribute to the delivery of biodiversity net gain.

7.3.24 The footway at the base of a tall building should be generous and proportionate, and cater for increased pedestrian activity outside its entrance. Drop-offs, service bays and car park entrances should be located away from the entrance of the building and principal routes to avoid conflicts with pedestrian activity.

7.3.25 Tall buildings can bring a greater concentration of uses and activities into an area, and therefore they are likely to increase the need for the provision of breathing, breakout and meeting spaces. Tall building developments should make a contribution to the public space provision in the immediate or wider surroundings. This should consider the needs of future residents and occupants, but also the wider public that uses this area.

7.3.26 Tall buildings cast shadows and can reduce daylight reaching public spaces. Their impact on natural lighting levels in public spaces will need to be carefully considered when deciding on the layout of a development and the location of a

tall building in relation to either existing or proposed public spaces. People enjoy spaces that benefit from direct sunlight whilst overshadowed and gloomy environments are less popular.

7.3.27 A proposed tall building should avoid causing significant overshadowing of neighbouring open spaces, such as public spaces or outdoor amenity areas (e.g. school playing fields), particularly during periods of peak use. Public open spaces are often more intensively used from lunchtime through the afternoon and into the early evening, while others, such as those associated with schools, may experience higher levels of use during the morning hours. Overshadowing during these key times should be carefully assessed and avoided where possible.

7.3.28 A tall building located to the north of an open space would cause no impact in terms of overshadowing, whilst a tall building located to the south would have its shadow travel across the space as the day passes by and possibly affect significant parts of the space. A tall building located

to the east of a public space would affect it during the early parts of a day, while when located to the west it may cast long shadows over a space as the sun is setting. For this reason generally locating tall buildings to the south or the west of public spaces should be avoided.

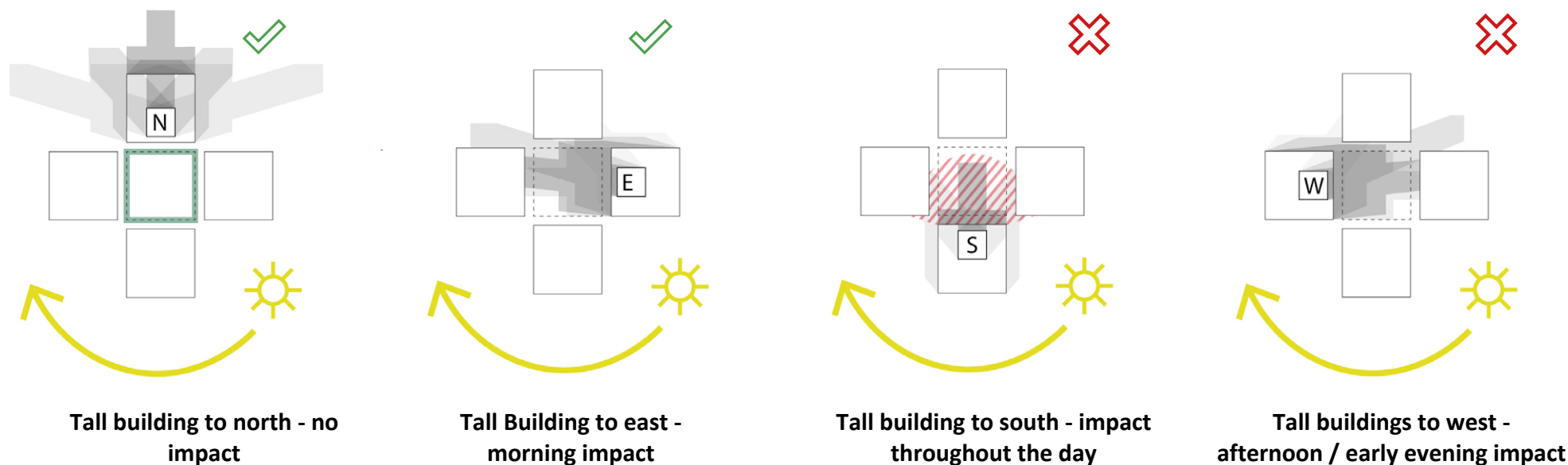


Figure 69: Tall buildings should avoid overshadowing open spaces. Proposals must consider the impact of shadow pattern on the amenity and usability of the public space.

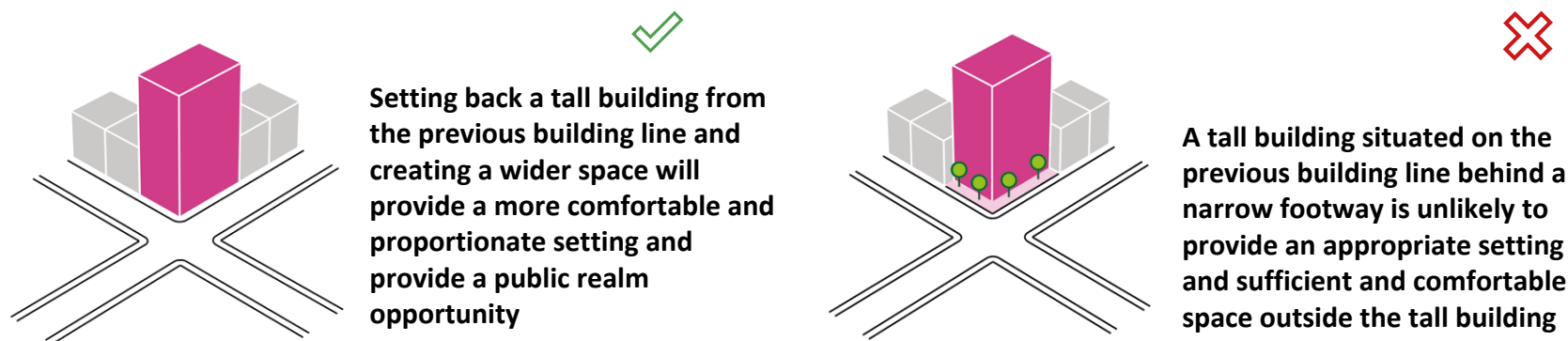


Figure 70: A tall building should provide an adequate setting within the street space, that corresponds to its height and scale. This could include moving the taller element back from the building line or street corner and establishing a wider pavement or public space

7.3.8 Avoiding Adverse Wind Impacts

7.3.29 Tall buildings will have significantly greater impacts on the local microclimate than other ordinary building types.

7.3.30 Tall buildings, as they reach above the general height of an area, disturb wind patterns. They can create down draughts, turbulence, as well as higher wind speeds, especially around building corners. Proximity between tall buildings can create a wind canyon effect with intense wind acceleration. These wind features can have a significant impact on the quality and safety of the public realm around the building. This could result in discomfort or unsafe conditions for pedestrians. Airflows can also create noise when interacting with a buildings form or detailing, which can be annoying and detract from the amenity of spaces and building uses, especially from wind.

7.3.31 Tall buildings above 25 metres that significantly stand out from the surrounding context, or are otherwise exposed to direct wind impacts, for example, those located at

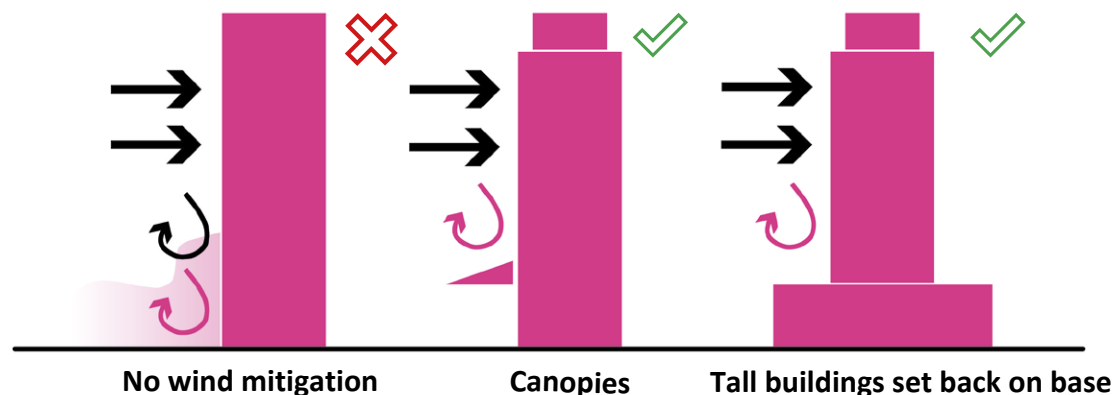


Figure 71: Good design of tall buildings should mitigate excessive wind at ground level

the edge of an open space, must be tested and refined using physical wind tunnel testing or computational fluid dynamics (CFD) modelling.

7.3.32 Wind assessments should be undertaken at the concept design stage to ensure that appropriate mitigating measures can be effectively integrated into the building design from the outset.

7.3.33 The Lawson comfort and safety criteria should be used to assess wind conditions, with testing based on a minimum of 16 wind directions, not just prevailing winds.

7.3.34 Following testing, the design of the tall building including the positioning, orientation and form as well as the articulation of the buildings base should be considered, with the aim to mitigate the impact of redirected wind, especially where it directly affects pedestrian amenity. Setting back the taller building element on the base, or the provision of low-level canopies can help to reduce the impact of wind on the public realm. The design of the building and detailing of the façade should consider and mitigate against wind noise.

7.3.9 Sustainability

7.3.35 Whilst tall buildings may be used to optimise density on a site, thereby making sustainable use of land, they are typically less sustainable than medium-rise buildings of similar floorspace due to greater structural and servicing requirements.

7.3.36 The operation of tall buildings is also normally more energy intensive and expensive, due to the vertical travel and servicing needs, the high façade to floor area ratio, the need for mechanical ventilation and cooling, as well as the challenges of maintaining and replacing cladding and other building components at height.

7.3.37 The construction and operation of tall buildings must be designed to high sustainability standards to minimise their impact on the environment. Tall buildings must respond to the climate emergency by ensuring they are designed to adapt to and mitigate climate change. They should also be designed to improve resource efficiency, minimise waste and re-use materials.

7.3.38 Tall buildings should aim to enhance their energy efficiency through the use of latest sustainable design and construction practices and technologies, with detailed consideration given to the built form configuration and orientation, energy sources and conservation, material source and life cycle, internal temperature control, use of natural ventilation and external shading, water use and conservation and mitigation of water run-off, waste management and on-site ecology.

7.3.39 Consideration should also be given to how to reduce the embodied energy in a building and enhance the long-term energy and resource efficiency by designing for flexibility and building adaptation. Renewable energy generation and the installation or future proofing for Photo Voltaics (PVs) should also be considered.

7.3.40 Summers in Britain are projected to become hotter with more frequently occurring heat waves as a result of climate change. The design of tall buildings should

take into account how the local climate will change so residents and users are protected from extreme weather. In the instance of heat waves, this may include external shading structures and the ability for residents to control the amount of shading, for instance through shutters.

7.3.41 Climate-change related storm events are going to continue to increase in numbers and tall buildings will need to be designed so they are safe and continue to provide adequate amenity for residents during a storm event, both within dwellings, on outdoor private or communal spaces, and around the building.

7.3.42 Innovative solutions to urban greening, green and blue infrastructure should be explored in the design of tall buildings. This may include vertical greening in the facade, and green or blue roofs.

7.3.43 Tall building developments should make a significant contribution to green and blue infrastructure which should be an

integral part of the design of the proposal. This can include landscaping and tree planting, sustainable urban drainage and other measures that mitigate the creation of heat islands, deliver cleaner air, support natural ventilation, mitigate risks from flooding (including but not limited to fluvial, tidal, and surface flooding), enhance biodiversity and offer resources for recreational, health and wellbeing benefits.

7.4 Application process and requirements

7.4.1 Pre-application Process

7.4.1 Applicants proposing tall buildings must engage **early on in discussions with planning and design officers** as part of the pre-application process. These discussions should begin as early as the concept stage, including during the development of a design brief by the scheme promoter.

7.4.2 Applicants will be strongly encouraged to enter into a **Planning Performance Agreement (PPA)** with the Greater Cambridge Shared Planning Service. A PPA enables a structured, coordinated approach to the preparation of proposals, providing timely and meaningful engagement with council officers and securing access to the necessary technical, design, and policy expertise. It helps ensure that proposals are brought forward with sufficient and relevant supporting material, and that key issues are addressed early and effectively.

7.4.3 Under the PPA the Local Planning Authority can provide advice on the assessment process, relevant policy

requirements, and known constraints and sensitivities affecting the site. Early engagement is held in a collaborative spirit, with the aim of offering guidance on strategic matters, design principles, and heritage or landscape sensitivities. This early input is intended to help inform decisions on whether a tall building is appropriate for a given site.

7.4.4 The PPA may facilitate continued engagement with the Authority at key design stages, including the concept design stage for individual buildings, or the masterplan stage for larger sites, as well as the later architectural design stage. Material demonstrating the testing and outcomes are important to these discussions and should be made available to the officers well in advance of meetings. This should include alternatives of lower height and/or different configurations that have been explored.

7.4.5 As part of this process, applicants are expected to submit relevant supporting material well in advance of meetings. This should include:

- A **Zone of Theoretical Visibility (ZTV)** diagram submitted before the first pre-application meeting (concept design or masterplanning stage) to assist in scoping visual and heritage impact work;
- Evidence of **alternative design options**, including schemes of lower height or different massing configurations, to demonstrate that the proposed height has been robustly tested; and
- Visualisations, testing outputs, and supporting analysis to aid discussions.

7.4.6 In addition to officer engagement, design review is a key part of the quality assurance process for tall buildings. Proposals should be subject to a minimum of two design reviews, using the Design Review mechanism available through the Local Authority. These reviews should take place:

- At the masterplan/concept stage, and
- At the architectural design stage, prior to the submission of a planning application.

7.4.7 The purpose of these reviews is to ensure design excellence, the appropriate integration of tall buildings into their context, and to maximise placemaking opportunities and environmental quality.

7.4.8 The iterative testing and assessment process may also require engagement with statutory consultees, such as Historic England, as well as other relevant stakeholders. The Local Authority will advise on who should be consulted and when, based on the scope and potential impacts of the proposal.

7.4.9 Applicants should also engage with the local community in line with the Council's Statement of Community Involvement, especially where proposals are likely to result in significant change or heightened public interest.

7.4.10 To ensure that the approved design quality is carried through to delivery, applicants are expected to retain the lead design architect (i.e. the architect who secured planning permission) for the duration of the construction phase. This is to ensure that the original design intent is preserved during detailed design and delivery. Where appropriate, this expectation may be secured through a Section 106 agreement.

7.4.2 Supporting Information

7.4.11 Tall buildings are a specific and unique form of development and as such require a specific approach in the planning process. The following recommendations for the local authority and applicants are made to ensure that tall buildings proposals are appropriately tested.

7.4.12 Applicants seeking planning permission for tall buildings in Cambridge and South Cambridgeshire are generally expected to submit full planning applications for their proposals.

7.4.13 Outline planning applications may be appropriate in the context of growth areas or other large development sites that are subject to comprehensive masterplanning. In such cases, applications should include refined parameter plans for building heights, supported by robust design criteria and subject to extensive testing at the masterplanning and concept design stages.

7.4.14 Applications for tall buildings due to their exceptional nature, will need to provide the following additional supporting information to enable a thorough assessment of the proposals and design:

- **Design and Access Statement (DAS)** that set out the architectural and urban design rationale for the proposal and addresses among other factors the development context, development objectives, relationship with the street and neighbouring buildings, relationship to open space (including waterways) scale and massing, alignment, density, materials, detailing, lighting (day and night time), existing and proposed land and building uses, ground floor uses, treatment of rooftop/ crown, ground floor treatment, landscaping and public realm strategy. The DAS should include a tall building statement that evaluates the benefits and justifications for a tall building on the proposed site in terms of the principles and the design criteria used to assess tall building proposals;
- **Visual impact assessment (VIA)** with Verified Views / Accurate Visual Representations (AVR's) that sets out the impact on Cambridge and South Cambridgeshire skyline, character and experience by testing relevant strategic, local, dynamic and approach views and demonstrate how the testing has informed mitigation in respect of the location height, mass and appearance of the proposed tall building. This should include a computer-generated zone of theoretical visibility. The impact on local, medium and long distance views should be demonstrated through accurate visual modelling of proposals (buildings fully rendered) – from relevant assessment points agreed with the Planning Authority. Proposals should be shown in daylight and night conditions and in different seasons. The applicant should engage in pre-application discussions with the Council to determine the scope of visual testing and agree the viewpoints that should be tested.
- **Townscape impact assessment (TIA)** for proposals in or near highly sensitive or sensitive townscapes.
- **Heritage impact assessment (HIA)** that identifies the heritage assets that the proposal has taken into account and includes assessment of strategic and other heritage views. This should demonstrate how the tall building proposal has responded to these heritage assets and their respective significance, and how the proposal has mitigated its potential adverse impact to avoid or minimise harm to the significance of the heritage asset and its setting.
- It is important that the visual impact, townscape impact, and heritage impact assessments are separately produced to ensure that each topic is given its relevant consideration (even when using the same visuals), and potential harm to the respective significance or characteristic is understood, and impacts are effectively mitigated.

- **Physical impact assessment** to illustrate the impact on micro climatic conditions (wind tunnel studies, sun path studies, overshadowing, heat island and glare studies), privacy and overlooking, telecommunications, and subterranean service infrastructure).
- **Daylight and Sunlight Assessment**, in accordance with the Building Research Establishment (BRE) Guidelines. This should evaluate the impact of the proposed development on the availability of daylight and sunlight to nearby buildings and spaces, particularly residential properties and public open spaces, and identify any necessary design mitigation.
- **Movement statement** that provides a traffic impact assessment, including car parking, pedestrian movement and public transport needs, and a servicing strategy.
- **Building services strategy**, including building systems and enclosure, energy

consumption and efficiency, lighting (day and night time), waste storage and disposal, and maintenance.

- **Sustainability statement** outlining how the building will apply best sustainable practices, including energy management and production, resource conservation, materials specification and waste management. A recognised method of sustainability assessment should be used (e.g., BREEAM, Home Quality Mark).

7.4.15 The greater the scale, impact and complexity of the proposals, the more detailed and comprehensive the statements should be to allow the application to be fully and effectively assessed. Applications submitted without the above supporting information may lead to a planning refusal on the grounds of insufficient information.

7.4.16 The potential clustering and cumulative effects of tall buildings must be addressed in the submission. Applications

must include adequate information on relevant existing tall buildings, extant permissions or concurrent proposals for tall buildings that have a bearing on the proposal's consideration.

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