

## **Chapter 3: Alternatives and Design Evolution**



INTRODUCTION

- 3.1 Under the 2017 EIA Regulations (as amended), an ES is required to provide a “description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects”.
- 3.2 This chapter summarises the main design alternatives considered by the Applicant and provides a qualitative comparison of their relevant environmental aspects.
- 3.3 A narrative is provided on the evolution of the selected design option for the site focussing on key design modifications made during the design evolution process. This information has been drawn from the Design and Access Statement, which provides a detailed overview of the evolution of the design of the Proposed Development. Environmental considerations which have influenced the design evolution process are discussed where relevant.

POLICY BRIEF

Minster Quarter Area Development Framework (MQADF)<sup>1</sup> (2018)

- 3.4 The Minster Quarter area is the subject of a policy in the Local Plan (see background context, refer **ES Chapter 2- EIA Methodology (Volume 1)**). However, with the various sites, and other adjoining land being in different ownerships, and likely to come forward at different times, RBC have identified the need for a detailed framework to guide and co-ordinate the various developments and to ensure the most appropriate form of development to serve the wider area.
  - 3.5 The vision for this area is:  
*“a distinctive and high quality, high density, mixed use area within Reading’s Central Core. The area will portray a unique character and sense of place retaining the historical associations of the area and its wider environs, providing high quality public realm, both through the enhancement of existing public spaces adjacent to the site and the provision of new spaces that provide a setting and focus for new development.”*
  - 3.6 A key note on the building heights in relation to Station Hill development<sup>2</sup> is set out below:  
*“The hub and spoke approach to tall buildings in the town assigns pre-eminence and dominance to the central cluster at Station Hill. Consequently buildings on the site will need to perform a supporting function to the central cluster at the station.”*
  - 3.7 The framework identifies the opportunity for four tall buildings located on the podium level of the Broad Street Mall. Additionally, the framework stipulates a nominal height capacity of 20 storeys above podium level, in relation to the Station Hill development (referenced as a Committed Development for the cumulative assessment, see **ES Chapter 2 – EIA Methodology (Volume 1)**).
  - 3.8 The framework identifies that the tall buildings within the area should be subservient to the development at Station Hill, but the nonetheless should be a significant landmark with long range and sky line viability.
  - 3.9 The framework identifies that the height classifications as well as the general principle of grading down towards the conservation area.
- Reading Tall Building Strategy**
- 3.10 The Reading Tall Building Strategy identifies that site is located within the Western Cluster (Figure 3.2).
  - 3.11 The Western Cluster is identified as being suitable for:  
*‘Up to three tall buildings would be appropriate, focused along the line of the IDR, to mark the area as the civic heart of Reading and a gateway to the centre’*  
*‘Transition in scale should be achieved by including angular planes which ensure that tall buildings step away from the lower scaled neighbouring buildings and the use of setbacks that are aligned with surrounding building heights.’*

<sup>1</sup> Website: [http://www.reading.gov.uk/media/9963/Minster-Quarter-Area-Development-Framework-Part-1/pdf/Minster\\_Quarter\\_Area\\_Development\\_Framework\\_Part\\_1.pdf](http://www.reading.gov.uk/media/9963/Minster-Quarter-Area-Development-Framework-Part-1/pdf/Minster_Quarter_Area_Development_Framework_Part_1.pdf)

Figure 3.1 Site location within the context of the Minster Quarter Area Development Framework

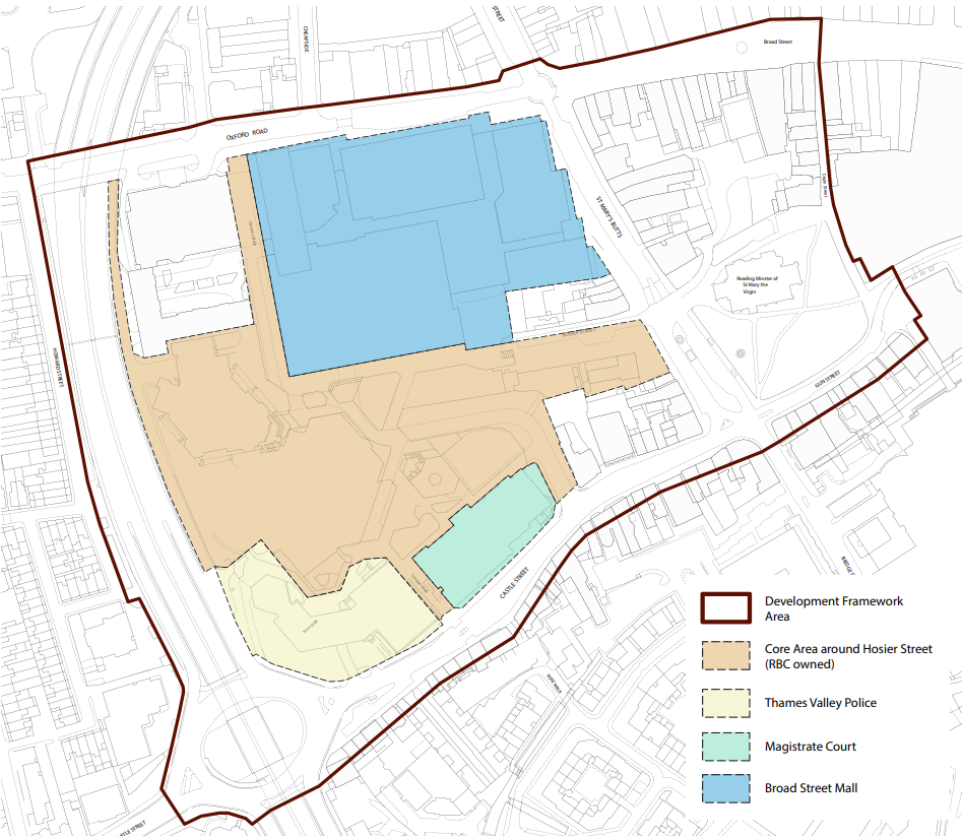
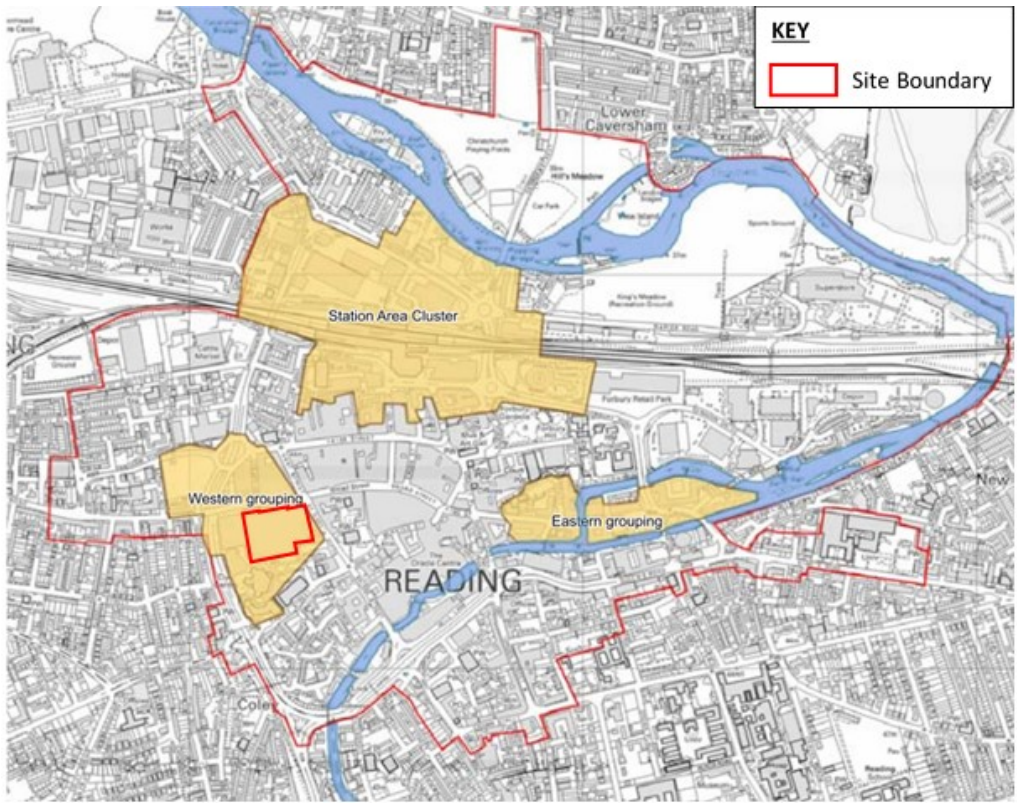


Figure 3.2 Preferred Tall Building Locations



Note: Areas identified for tall buildings within shaded yellow

<sup>2</sup> Located approximately 500m north east of site, planning reference: 151427.

### ALTERNATIVES

**3.12** The following sections review the alternatives to the Proposed Development that have been considered by the Applicant, including:

- Alternative Sites; and
- The Do-Nothing / No Development Alternative.

#### **Alternatives Sites**

**3.13** No alternative sites or locations have been considered for the Proposed Development.

**3.14** The Applicant owns the site and the Applicant is keen to continue the redevelopment of the site and introduce a mixed-use development on site. Aiding the development of this key central urban area of Reading.

**3.15** Additionally, the site is identified in local policy (Minster Quarter Area Development Framework) as suitable for development of residential provision.

#### **Do Nothing / No Development Alternative**

**3.16** The Do-Nothing / No Development Alternative refers to the option of leaving the site in its current state.

**3.17** The option of Do-Nothing / No Development whatsoever on the site has therefore not been considered as the site represents an opportunity for the continued development of the existing shopping centre in a sustainable manner, which will be capable of providing new residential floorspace and new public realm. Regeneration of this nature will lead to employment opportunities and other direct and indirect socio-economic benefits that would otherwise not be realised should the site be left in its current status.

### DESIGN INFLUENCES

#### **Site Constraints**

**3.18** The site is subject to constraints which have been key drivers in shaping the design of the Proposed Development, the constraints are listed below:

- The existing Broad Street Mall shopping centre on site;
- The existing multi storey car park;
- 1970s mall design leads to a blank inward looking development and does not respond well to its context or public realm;
- Urban environment although green is drab and inactive;
- Poor quality and tired architecture and poor gateways especially around south court;
- St Mary's Butts / Castle Street conservation area located to the south and east of site; and
- Views towards St Mary Church / Reading Minster.

#### **Site Opportunities**

**3.19** The sites location provides a few opportunities for the design of the Proposed Development as outlined below:

- The site is centrally located and near to numerous forms of public transport;
- The site is located within the Western Cluster of the Reading Tall Building Strategy; and
- The site is located within the Minster Quarter Area Development Framework.

### DESIGN BRIEF

**3.20** The design aspirations for the Proposed Development are focused around the Applicant's vision for the continued renovation and development of the Broad Street Mall site, changing the site to a mixed-use development.

**3.21** The design brief included making the most of the opportunities of present on site, as outlined below:

- Opportunity to take advantage of one of the few brownfield sites in the centre of Reading to accommodate the growing demand for urban living;
- Develop a design strategy for upper level uses with the least disruption to the live retail environment;
- To strengthen the area as a key quarter, as it once was, through new development;
- Open up the frontages and continue the rejuvenation of Broad Street Mall offer through bringing in a broader mix of uses;
- Ensure where possible that the new development has an active outward looking aspect both at street level and upper level;
- Evolve an architectural strategy that responds the design guidance set out in the tall buildings guidance<sup>3</sup>;
- Become a vibrant catalyst for future development in this quarter of the city;
- Take advantage of a highly accessible public transport area;
- Develop an architectural approach that responds to the modernist 1970's architecture of broad street mall but is also sensitive to the adjacent conservation area;
- Ensure good quality design and architecture; and
- Ensure that the development aligns with the principles set out in the Minster Quarter Area Development Framework.

### CONSULTATION

#### **Pre-Application Discussions**

**3.22** The Applicant recognises the ongoing need to provide clarity about the proposals. As a result, the project team thought it was important to facilitate an open and transparent discussion about their proposals. The aim was to provide information about the proposals to Broad Street Mall and address any queries from councillors, community and amenity groups and local residents.

**3.23** Consultation and engagement on the future of the site began with a preview event. The event was held at the Broad Street Mall on Monday 6<sup>th</sup> and Tuesday 7<sup>th</sup> August and was promoted through a letter sent to all tenants, key stakeholders and 598 near neighbours.

**3.24** The programme of public engagement continued with the Council's autumn SPD consultation which was attended by members from the project team. The event was also attended by Deputy Leader of the Council, Cllr Tony Page, Vice-Chair of Planning Applications Committee, Cllr Karen Rowland, and Abbey ward councillor Mohammed Ayub.

**3.25** Representatives from local businesses, institutions and residents associations were also in attendance. The event gave attendees an opportunity to address local concerns, including questions on the proposals for Broad Street Mall. The project team were on hand to address any questions in relation to the plans for the Mall.

**3.26** Following submission and validation of the December 2018 planning application, the Applicant engaged with Reading Borough Council Planning Officers and Design South East as summarised below:

- On 13<sup>th</sup> March 2019, the Applicant met with RBC to discuss the timelines, consultation and progress of the planning application, including proposals to revise the application design to respond to comments received from Design South East;
- On 21<sup>st</sup> May 2019, the Applicant met with Reading Borough Council to discuss the potential amendments to the application scheme. It was felt by the council that the scheme could go further in terms of design quality;
- On 7<sup>th</sup> August 2019, the Applicant held a conference call with Reading Borough Council to discuss further proposed amendments, responding to the Council's concerns to the design and height of the application

<sup>3</sup> <http://www.reading.gov.uk/media/2870/Reading-Tall-Buildings-Strategy-0308/pdf/Reading-Tall-Buildings-Strategy-0308.pdf>

scheme. The further design work which was carried out throughout August 2019 was tabled to the case officer who recommended a further DSE review prior to re-issue of revised drawings;

- On 23<sup>rd</sup> October 2019, the Applicant met with Design South East to discuss the propose updates, responding to comments received from Design South East in December 2018, it was concluded that the changes to the scheme were welcome and scheme was supported by the panel; and
- On 4<sup>th</sup> November 2019, the Applicant met with Reading Borough Council to discuss the latest proposed updates prior to formal submission of the amended scheme. The proposed heights of the buildings has been considered acceptable in principle by Reading Borough Council, however it was noted that the design and materials proposed for the residential blocks must be of high quality design and material which adds to the quality of the area whilst being sympathetic to the local character and history of the surrounding Conservation Areas and listed buildings.

### Public Consultation

- 3.27** Most recently, a public exhibition was held over three days from Thursday 29<sup>th</sup> November to Saturday 1<sup>st</sup> December. The public exhibition was based in Broad Street Mall and was advertised to stakeholders, tenants and approximately 5,300 local residents. Attendees included representatives from the Council, local amenity societies and local businesses.
- 3.28** An advertisement for the exhibition was also displayed on digital screens around the mall. In addition, members of staff wore exhibition branded jackets during the exhibition.
- 3.29** Throughout the consultation process a dedicated telephone number, e-mail and mailing address were supplied, providing further information to residents, local groups and stakeholders upon request which will continue to be active as proposals develop and progress.

## DESIGN EVOLUTION

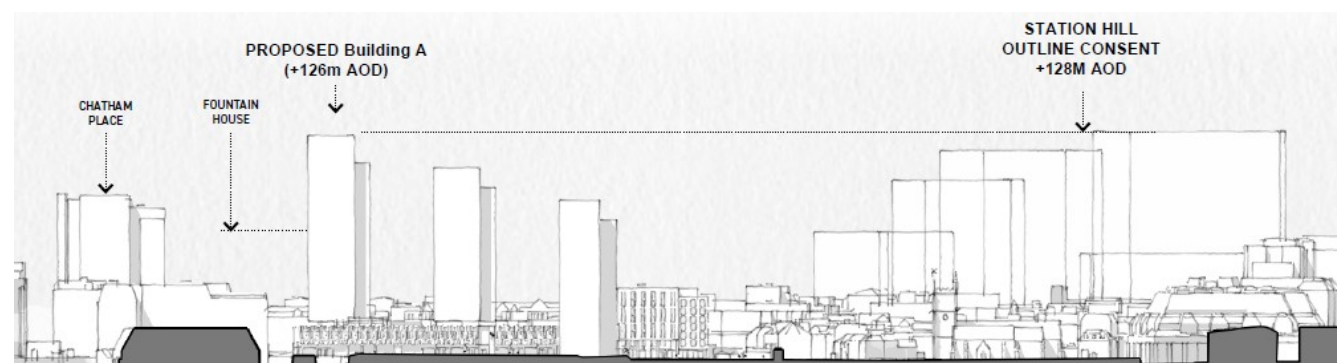
- 3.30** Prior to engaging in pre-application discussions with the RBC, initial studies were undertaken into the main design elements. This process allowed the scheme and brief to be tested and developed, to ensure the Proposed Development meets the needs and demands of building users. The main design elements which have evolved through the design process, are as follows:
- Height and Massing; and
  - Layout.

### Height and Massing

#### Buildings A, B and C

- 3.31** The key driver in the design development of buildings A to C relates to the presence of the St Mary's Butts / Castle Street conservation area to the south and east, and the presence of Reading Minster of St Mary (Grade I listed) and it's protected view located to approximately 100m to the east of site (Figure 3.3).

**Figure 3.3 Proposed Development Height within the context of other Tall Buildings within Reading**



- 3.32** As previously mentioned in Policy Brief section, the site is located within the Western Grouping for Reading's Tall Building Strategy and the Minster Quarter Area Development Framework identifies the potential for a cluster of tall buildings to be present on site with a suggested height of 20 storeys above the existing mall roof level. It should be noted that following further meetings with RBC this year, RBC have suggested the proposals could be taller than policy subject to the quality of the architecture.

- 3.33** Consequently, the Proposed Development includes two buildings (Blocks A and B) that sit above the podium level of Broad Street Mall and one tall building on South Court immediately adjacent to the mall's southern entrance (Block C). The tallest building (Block A) of the Proposed Development is 22 storeys above podium height (25 storeys in total).



September 2016

- 3.34** The initial Massing studies were based upon available space / core locations at ground level and testing various height options against the Station Hill Outline Consent.



October 2016

- 3.35** Further development of the scheme to provide student accommodation was developed. This involved linking the 3 distinct towers at the lower levels immediately above the car park. It was felt however that this massing option was inappropriate due to lack of permeability through the site from a North to South aspect.



November 2016

- 3.36** A tall massing option was redeveloped as private residential with a square floorplate.



December 2016

- 3.37** The architectural treatment began to develop in order to achieve a tall, slender looking family of buildings. The orientation of the cores was also interrogated.

May 2017



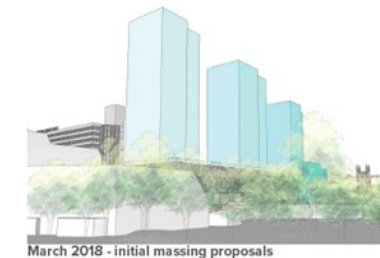
- 3.38** The floorplates of Buildings A to C were inset, helping break down the mass and improving the vertical emphasis of the forms.

- 3.39** Buildings A and B were shown at the same height but with a step in the massing to respond to the adjacent conservation area.



August 2017

3.40 The heights of sites A and B were still shown similar in height but the architectural treatment was developed further following advice that the scheme should be taller.



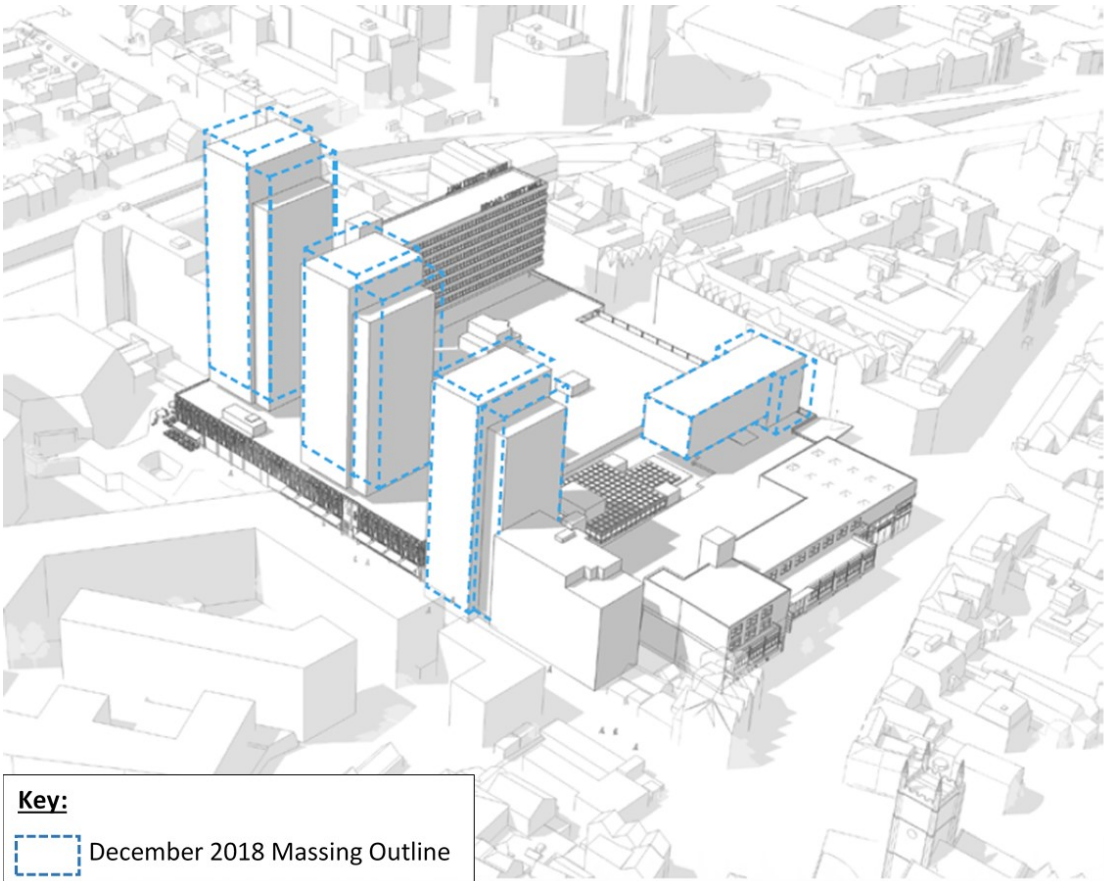
March 2018

3.41 The step in the mass was retained and the scheme was lowered following further advice from RBC who had reservations on the scale.

2019 Design Evolution

- 3.42 Following the DSE review in December 2018 it was felt that the massing of the proposals was not justified. The overall height of the scheme was not justified and they did not support the scheme that was tabled.
- 3.43 The floor plans were interrogated and the apartment plans were redesigned to mitigate all north facing single aspect units. The circulation core for block B was redesigned to replicated that of Block A, helping reduce the massing of Block B considerably. The reconfiguration of the apartments also helped to slim down the massing of each Block. Revisiting the structural strategy of the towers allowed the scheme to be reduced in height by 1 storey whilst still maintaining the current number of residential storeys. This in turn helped reduce the cumulative visual impact along Dusseldorf Way.

Figure 3.4 Reduction in Massing



Block D

- 3.44 Structural limitations of the existing Broad Street Mall limit the extent of development which the Proposed Development could comprise. As such Building D of the Proposed Development was previously limited to a 2 storey extension of the existing structure and refurbishment to provide residential units.
- 3.45 Block D was omitted from the scheme prior to the second DSE Review (October 2019) for commercial reasons.

Block E

- 3.46 Massing and design of Block E has evolved from two buildings to a reduced massing in a single building to minimise the DSO and rights of lights impact on the residential buildings adjacent to the north of site, see Daylight, Sunlight and Overshadowing below.
- 3.47 At the DSE review in December 2018 it was felt that the massing of Block E could be further simplified. The original design was based upon apartment types and aspects. Revisiting this, the scheme massing has been simplified to be rectilinear in plan removing 2 units overall. The scheme has also been updated elevationally to take a cue from the adjacent, existing Fountain House. This was welcomed at the second DSE review.

Layout

- 3.48 One the first exercises in the layout process was to determine where the development could meet the ground level to allow easy access and activate the street frontage.
- 3.49 The Applicant has recently undertaken a series of aesthetic updates and improvements to the existing mall.
- 3.50 In a constrained live retail environment the areas available for development were limited and it was important to minimise disturbance to the existing retail environment, the final residential core locations can be seen in (Figure 3.5).
- 3.51 The core positions were defined by the areas where it is anticipated they will have the least disruption to the existing retail centre, subsequently a structural strategy was compiled to work within the constraints of a live retail environment further details regarding the demolition and works associated with the Proposed Development can be found in **ES Volume 1: Chapter 5 - Demolition and Construction**.

Figure 3.5 Residential Building Core Locations



## Materiality

- 3.52 Materiality has been developed further following discussion with the council regarding quality and the relationship to the adjacent conservation area and Minster. It was felt after further development that the material palette could be simplified further. Along with structural constraints following the updated structural strategy, the proposed material palette is a metal cladding system with bespoke laser cut metal infill panels and aluminium framed glazing system. This refers to all blocks on the scheme.

## Amenity Area

- 3.53 Following comments at the DSE review in October 2019 it was felt that the amenity deck needed to increase in size. This has since been increased in area further northwards on plan so as to not affect the visual impact along Dusseldorf Way. The scheme now also includes for amenity on the rooftop of Block E.

## KEY ENVIRONMENTAL CONSIDERATIONS

- 3.54 Several environmental considerations have had a meaningful design influence. These have been as follows:

- Townscape, Built Heritage and Visual Impact Assessment;
- Daylight, Sunlight and Overshadowing; and
- Wind Microclimate.

## Townscape, Built Heritage and Visual Impact Assessment

- 3.55 The MQADF also identifies that:

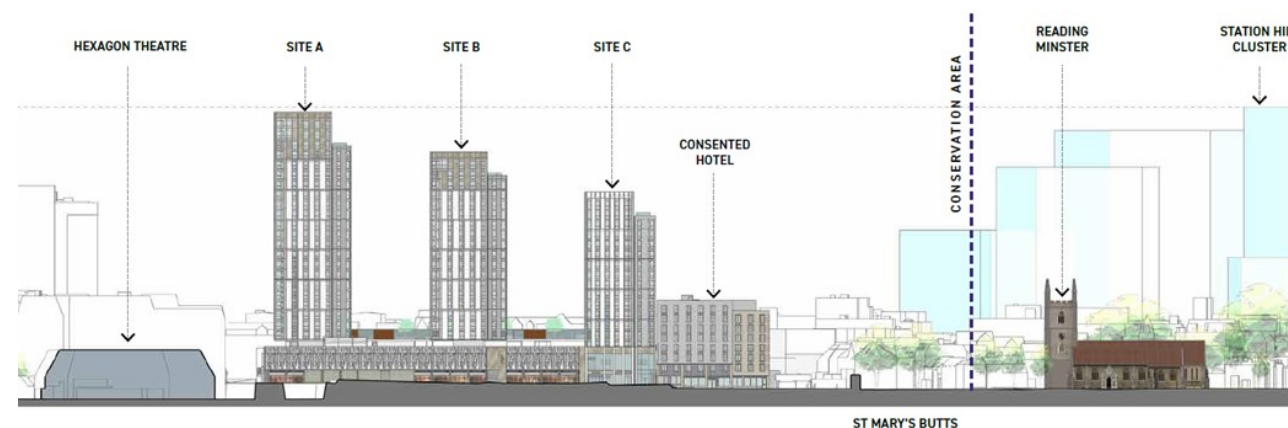
*'Additionally, primacy of a central tall building and supporting tall buildings providing a stepped transition to the high point is the preferred configuration for tall building distribution within the site and takes into account:*

- *The high percentage of listed buildings locally, especially:*
  - *St Mary's Grade 1 Listed Church and views thereto.'*

- 3.56 Buildings A to C have been designed to step down in height to east, in order to minimise the Proposed Developments impact upon the Reading Minster of St Marys as outlined within the MQADF (Figure 3.6). Additionally, the cladding of Building C has been selected to be sympathetic to the existing surrounding character of the conservation area, Building C will use two tones bricks.

- 3.57 The Proposed Development has been designed to be in keeping with the adjacent listed Minster and conservation area. The proposed AOD of the tallest tower is +126m, 2m below the 128m cap at the Station Hill Cluster (outline consent).

Figure 3.6 Down grading of Buildings A to C



## Daylight, Sunlight and Overshadowing

### Buildings A to C

- 3.58 Buildings A to C, the tallest buildings on site, are located on the southern boundary of the site. Locating towers along the southern boundary minimises the impact of overshadowing created by the site, as rather than impacting the surrounding residential receptors the majority of the overshadowing caused by the Proposed Development will fall over the existing site (Figure 3.7).

Figure 3.7 Buildings A to C Overshadowing – 21<sup>st</sup> June (9am, 12pm and 5pm) Combined

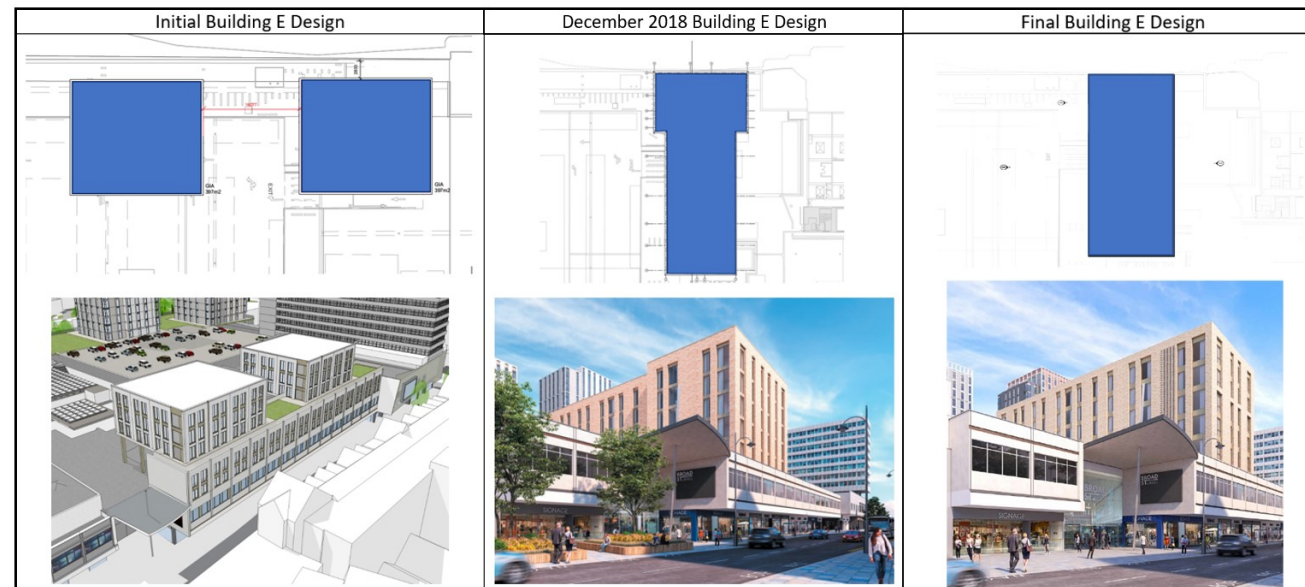


### Building E

- 3.59 Initially, Building E included the absorption of two existing retail units at ground level with two buildings above the centre (Figure 3.8), joined by two levels of accommodation along the northern edge, however following Daylight Analysis and concerns that the height and massing would impact on the McIlroy building to the north of site, it was established that the proposals would impose a substantial negative impact on the McIlroy's right of light. Consequently, the massing of Building E was reduced and the massing was rotated 90 degrees in plan, avoiding any overshadowing and improving the aspect of all units within the block (Figure 3.7).

Block E previously had a hammer head shape to the buildings form which was due to the apartment layout and configuration. The amended layout has now been simplified to a rectilinear form, reducing the width of the elevation and improving the cumulative visual impact.

**Figure 3.8 Building E Layout and Appearance (Initial and Final)**



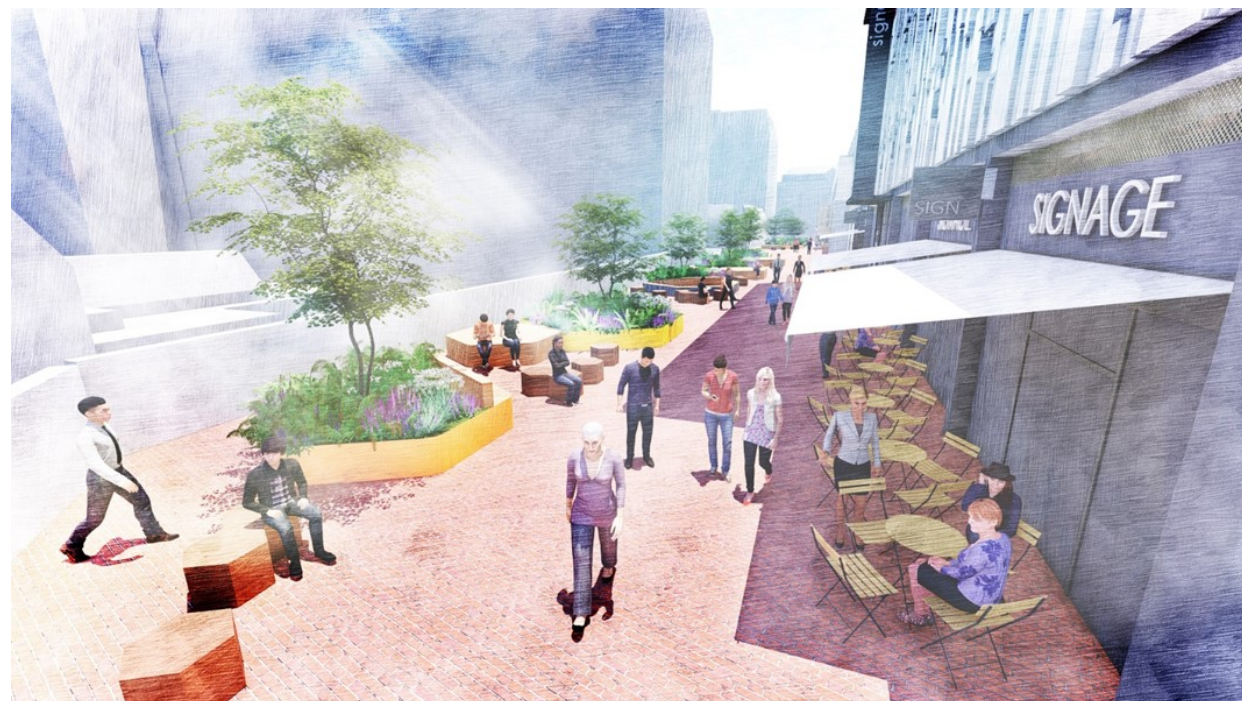
## Amenity Areas

- 3.60** The public realm proposals have evolved following a dialogue with Reading Borough Council, Public Consultation and Design South East Review Panel in December 2018 and October 2019.

### Queens Walk Public Realm

- 3.61** The proposals for Queens Walk have developed from hexagonal planters with integrated seating providing a 3.2m clear route for pedestrian in December 2018 (Figure 3.9). The revised proposals create a simpler rectangular form of planters with integrated seating providing a 5m clear route for pedestrians and releases space for events to be programmed into the street. The brick surface finishes have been simplified from a mix of brick tone in December 2018 to a simple red clay brick with blue clay brick highlights that correspond with the streets in the centre of Reading (Figure 3.10).

**Figure 3.9 Queens Walk - December 2018 Design**



**Figure 3.10 Queens Walk – Amended November 2019 Design**



### Dusseldorf Way Public Realm

- 3.62** The amended November 2019 proposals have developed to introduce additional planters along the frontage whilst maximising the south facing aspect for external seating to ground floor retail units, Dusseldorf Way forms an important link between the Minister and the Hexagon Theatre. The brick surface finishes have been simplified from a mix of brick tones to a simple red clay brick with blue clay brick highlights that correspond with the streets in the centre of Reading.

### Car Park Roof Level Public Realm

- 3.63** The scale and visibility of the car park has been reviewed in November 2019, and the amended designs introduce shade structures with integrated planters and climbing plants to create a greener outlook for future residents, office users and visitors using Broad Street Mall.

### Buildings A, B and C Amenity Roof Terrace

- 3.64** The landscape proposals for the amenity roof terrace has evolved into a series of outdoor rooms that are protected by glass parapets and pergola structures which aim to dissipate the wind.

### Podium Amenity Level

- 3.65** The communal amenity roof area has increased from the December 2018 proposals of approximately 1,187 m<sup>2</sup> to 2,085 m<sup>2</sup>. The communal amenity spaces have been refined to accommodate a range of amenity uses including play, reflective spaces, communal tables and seating with integrated planters that provide privacy to apartments at the roof terrace level (Figure 3.11 and Figure 3.12).

### Building E Amenity Roof

- 3.66** The landscape proposals for Building E have developed significantly from the December 2018 proposal which did not provide separate amenity space for this building.
- 3.67** The amended proposals now integrate a communal amenity roof terrace on the top floor of Building E providing 672 m<sup>2</sup> of amenity space for play, reflective spaces, communal tables and seating with integrated planters. This elevated position will provide residents with access to long distance views over Reading.

Figure 3.11 December 2018



Figure 3.12 November 2019



### Wind Microclimate

- 3.68** For the December 2018 submission a wind mitigation workshop was undertaken to identify the mitigation measures required to make appropriate the wind conditions on and off site, these wind mitigation measures included detailed landscaping measures on and off site.
- 3.69** The wind mitigation measures identified in the December 2018 submission have been included (where possible) in the landscaping plans for the amended scheme. Wind tunnel testing of the amended Proposed Development identified strong winds and unsuitable conditions (i.e. stronger wind conditions than desired) to the west of the amenity deck between Buildings A and B, to the north east of the amenity deck near Building C, and at the private terrace on Building A. Further localised mitigation measures would be required at these locations to mitigate strong winds and to provide calmer wind conditions during the summer season and safe wind conditions. Wind mitigation measures at these locations could be in the form of additional soft landscaping elements and/or additional trellises/canopies which would provide shelter at the seating areas. Further wind tunnel testing would be required to verify the effectiveness of additional measures at these locations, further details can be found within **ES Volume 1, Chapter 10: Wind Microclimate**.