

3 ALTERNATIVES AND DESIGN EVOLUTION

Introduction

- 3.1 The EIA Regulations require the ES to report on the reasonable alternatives (for example in terms of design, technology, location, size and scale) studied by the Applicant, 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 of the ES therefore explores the objectives of the proposed development, its design evolution and the reasonable alternatives considered. It outlines the analysis of the application site and existing environmental conditions which informed the design evolution of the proposed development. The 'Do Nothing' scenario is also addressed.
- 3.3 Throughout the design process there has been regular consultation with RBC and other key stakeholders. In addition, the Applicant has undertaken a community engagement programme which has also informed the design process.
- 3.4 Further details can be found in the Design and Access Statement and the Statement of Community Involvement (SCI) which accompany the planning application.

Development Objectives

- 3.5 The Applicant's development aspiration for the application site seeks to ensure the comprehensive and high-quality redevelopment of the application site which will optimise the use of the site and integrate positively with the surrounding area.
- 3.6 Accordingly, the overall guiding objectives for the proposed development have been as follows:
- Create a new urban neighbourhood that is economically thriving and resilient;
 - Produce a flexible development envelope for future reserved matters applications to comply with;
 - Provide a new activated frontage within key routes within the application site;
 - Improve connectivity and permeability throughout the application site; and
 - Work closely with communities and stakeholders.

Development Considerations

Policy Requirements

- 3.7 Development considerations for the application site are set out in the adopted planning policy and guidance documents summarised in Chapter 1 of this ES Volume. These were considered and informed the design of the proposed development.

Site Constraints

- 3.8 Analysis of the existing application site conditions identified the key environmental factors (see ES Chapter 1) and the following physical constraints which were taken into account in the design evolution process:
- The application site is enclosed to the north and west by Vastern Road and Caversham Road respectively. These roads are busy and congested, they present a source of noise and high level of vehicle emissions to existing and future site users.

- The majority of the application site (approximately 95 %) is located in Flood Zone 2 (Medium Probability). Small areas (<5 %) in the west and centre of the site are located in Flood Zone 1 (Low Probability), and a small portion (< 5 %) of the north-eastern site boundary is located in Flood Zone 3 (High Probability) where the annual probability of flooding from rivers is 1 in 100 (1 %) or greater, and from the sea is 1 in 200 (0.5 %) or greater. This informed site levels and location of habitable rooms.
- The existing buildings offer a limited amount of active frontage onto the Vastern and Caversham Roads as they are set back from these boundaries and discourage pedestrian use as there are no through routes provided.
- The application site has on-site trees predominantly around the application site perimeter. Whilst none of the trees are subject to a Tree Protection Order (TPO), consideration was given to maximising the number of trees to be retained and minimising impacts to retained trees during the demolition and construction works, with continued measures for protection once the proposed development has been completed.
- In addition to the arboricultural survey, ecological surveys were undertaken to determine any constraints in respect of ecology, in particular, protected species (roosting bats) and nesting birds.
- There are low rise terrace houses to the north of the application site, on the other side of Vastern Road, which have informed the height and massing proposals.

Environmental Considerations

- 3.9 Analysis of the existing application site conditions identified the key environmental factors (as summarised in ES Chapter 1: Introduction). The following factors have influenced the design evolution process.

Socio-Economics

- 3.10 The application site currently comprises retail warehouse units housing Aldi, Mothercare, The Range, Majestic Wines and a TGI Fridays. These uses offer job opportunities and contribute to spending in the local economy. The proposed development would create a range of employment opportunities both through the demolition and construction stage and the completed development stage.

Air Quality

- 3.11 The application site is located within an AQMA declared under the Environment Act 1995, which incorporates the whole of the RBC. The AQMA has been designated due to NO₂ and PM₁₀ concentrations in excess of the current National Air Quality Standard objectives.
- 3.12 The proposed development could introduce a new residential population, and therefore early specialist design advice was provided to ensure that the application site is suitable for residential occupation and that residents would not be adversely affected by both existing and future air quality.

Noise

- 3.13 The application site is located in an area where railway and road traffic noise are noticeable. Baseline noise surveys were undertaken at the application site to characterise existing conditions and noise modelling undertaken to inform potential mitigation measures.

- 3.14 Measures to minimise noise emissions from the proposed development (such as those from demolition and construction works, plant, servicing and delivery arrangements and vehicle movements) were actively explored during the design evolution process.

Daylight, Sunlight and Overshadowing

- 3.15 Various height and massing options for the application site were explored during the design evolution process, taking into consideration the strategic policy requirements for the application site's redevelopment and the daylight, sunlight and overshadowing amenity of sensitive receptors.
- 3.16 The proposals were subject to daylight, sunlight and overshadowing assessments to consider impacts to the surrounding sensitive receptors, as well as at the potential on-site residential units and open space provisioning.
- 3.17 These assessments resulted in the refinement of building heights and massing, and where possible, building plots were set back or reduced in height to improve daylight and sunlight levels.

Townscape, Views and Built Heritage

- 3.18 The application site and its immediate setting fall within Reading Tall Building Strategy (RTBS) (2018) Character Area (CA) 22: Vastern Road. The northern edge of the application site immediately abuts CA12: Caversham Road. CA1: Station Hill abuts the boundary of CA22 to the south and CA23: King's Meadow abuts the northern and eastern boundaries of CA22.
- 3.19 There are no established key views within CA22 but views towards it are obtained from elevated land to the north and Oxford Road to the west. The Reading Station Area Framework (RSAF, 2010) sets out the location for two new views to be created within the CA from the Station Square North and Christchurch Bridge.
- 3.20 The CA is considered to be suitable for tall buildings, albeit not along the roadsides and the tallest structures should be nearest to the railway line. The RSAF includes a number of corridor views towards the application site from the west and north and a view to be created from the station subway south of the application site. Accordingly, careful consideration was given to the design proposals and their visual impact.

Transport and Accessibility

- 3.21 The application site is located within an established mixed-use area, comprising both commercial and residential land uses. The site benefits from good transport infrastructure in close proximity which facilitates travel by non-car modes such as walking, cycling and public transport.
- 3.22 The emerging proposals have sought to maximise permeability across the proposed development. At the detailed design stage, the proposed movement routes would be further developed to ensure that an appropriate permeability across the application site is delivered.
- 3.23 Measures to minimise the demolition and construction transport impacts of the proposed development were explored, including other potential routes for construction traffic to and from the application site.

Climate Change

- 3.24 Due to the outline nature of the development proposals, opportunities to integrate climate change resilience and adaptation have been limited to the following:
- Incorporation of measures to reduce the risk of flooding through sustainable drainage.
- 3.25 At the detailed design stage, opportunities would be sought to future-proof the proposed development against climate change effects; whilst at the same time, limiting the proposed development's contribution to climate change. Accordingly, measures would be considered and explored during the detailed design process to:

- minimise water consumption, such as the installation of water saving devices;
- reduce carbon dioxide emissions and overheating through energy efficient design;
- minimise the generation of waste and to maximise re-use or recycling;
- use native species within the landscape proposals;
- avoid overheating within residential units; and
- sustainably source and procure materials with lasting life spans.

Health and Wellbeing

- 3.26 Due to the outline nature of the development proposals, opportunities to integrate health and wellbeing have been limited to the provision of:
- a range of residential unit types and tenures;
 - a range of open space and amenity space;
 - safe, accessible spaces; and
 - opportunities for walking and cycling.
- 3.27 At the detailed design stage, opportunities would be sought to promote healthy lifestyles and to improve personal wellbeing as far as reasonably possible. Accordingly, the Applicant would seek to deliver:
- high quality homes, appropriately sized, energy efficient, warm and dry;
 - access to new open space amenity;
 - internal and external noise levels that comply with the World Health Organisation (WHO) requirements;
 - appropriately designed public open space to enable active play and opportunities for community engagement; and
 - appropriately designed public open space that comply with 'secure by design' principles.

Environmental Opportunities

- 3.28 The redevelopment of the application site presents the following opportunities:
- **Ground Contamination** - Due to the application site's industrial past, hotspots of contamination may be present. The proposed development offers the opportunity to improve conditions by virtue of the removal of existing made ground as part of the proposed excavation for the surface water attenuation tanks;
 - **Landscape, Amenity and Public Realm** - The proposed development represents an opportunity to provide public and private amenity space; landscaping and playspace to create a more accessible and welcoming environment;
 - **Ecology** - The proposed development provides opportunities for ecological and biodiversity enhancement through the planting of new trees and landscaping; and
 - **Socio-Economics** - The proposed development presents the opportunity to provide high-quality residential units; to create employment opportunities and to generate additional local spend in the area.

Alternatives

Do-Nothing

- 3.29 The 'Do-Nothing' alternative is a hypothetical alternative considered in EIA as the basis for comparing the development proposals under consideration.

- 3.30 The application site could be left in its current state as a retail park. This would result in the following environmental effects:
- **Socio-economics** – The application site currently comprises retail warehouse units. In the Do-Nothing scenario there would be no opportunity to deliver housing in accordance with planning policy objectives and no new employment opportunities which would be generated through both the demolition and construction and completed development stage;
 - **Transport** – in the Do-Nothing scenario, there would be no improvement in neighbourhood connectivity and permeability and no reduction in the number of vehicle movements on the surrounding road network;
 - **Health and Wellbeing** – in the Do-Nothing scenario, there would be no improvement in public realm or creation of open space which would provide amenity areas for on and off-site users; and
 - **Ecology** – No improvement in biodiversity.
- 3.31 The Local Plan provides a clear framework for development on the application site and in the wider area. If the Applicant were not to bring forward the proposed development, the objectives of the Local Plan would not be met.
- 3.32 Consequently, the Applicant ruled out the 'Do-Nothing' alternative.

Alternative Sites

- 3.33 No alternative application sites have been considered by the Applicant for the following reasons:
- The application site is owned by the Applicant and therefore application sites belonging to third parties were not given consideration;
 - The application site is suitable for this type of development, as demonstrated by site allocation within adopted local policy; and
 - The proposed development presents an opportunity to optimise the use of land in accordance with the NPPF.

Alternative Designs and Layouts

- 3.34 The proposed development submitted for approval is the result of a thorough analysis of environmental constraints and opportunities, access issues and market demand. Consultation with RBC, the statutory consultees, the local community and other local stakeholders has been a key influence in design evolution.

Alternative Layouts

- 3.35 The following principles and parameters have been carried forward for the proposed development:
- The layout design continues the south to north pedestrian connection, which links the south of Reading to the north and onwards, creating a quality pedestrian connection from the train station to Caversham;
 - The development plots respond to vehicular and pedestrian routes to ensure continuity and additional connections within the local movement network; and
 - The location and heights of the development plots within the application site have been refined to respond to provision of daylight and sunlight amenity to surrounding receptors.
- 3.36 Following discussions with RBC, the separation distance between Plots C and D were increased to reflect RBC aspirations for connectivity and increased public realm, as shown in Figure 3.1. This amendment to the proposed development parameters improves visibility from the railway underpass/Station Square north and Vastern Road in line with the RSAF.

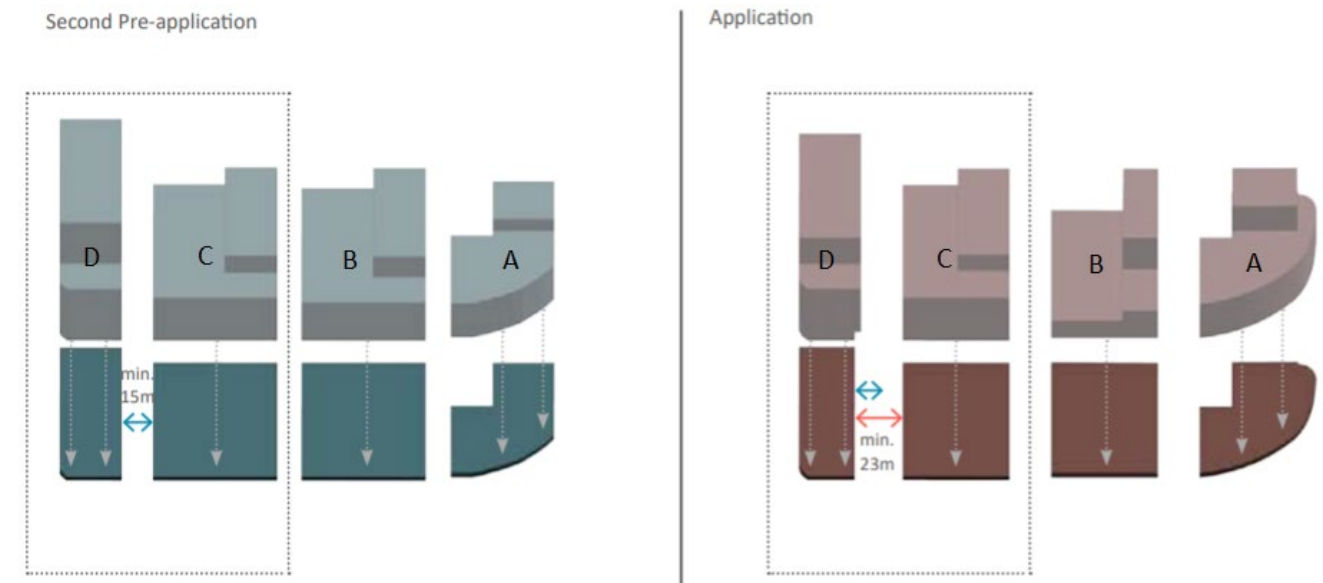


Figure 3.1: Amendment to Separation Distances of Plot C and D

- 3.37 Further amendments to the layouts following discussions with RBC include:
- The development footprint previously extended to the junction of Vastern Road with Caversham Road. This has been amended to allow for retention of existing trees;
 - Distance between development plots has been widened from the minimum 12 m required for commercial use to 15 m to allow for more public realm; and
 - Plots A and B were set back from the application site boundary with Vastern Road to allow for a future shared pedestrian and cycle route to be accommodated, should this be progressed by RBC.

Alternative Heights and Massing

- 3.38 Throughout the design evolution, alternative height and massing options were explored to ensure there would be no significant impacts to surrounding sensitive receptors with regard to daylight and sunlight amenity. In addition, the RSAF recommends future developments to create a gradient of height and density that would reach maximums around Station Square North.
- 3.39 Following discussions with RBC, the height of Plot D was reduced to demonstrate a clearer hierarchy between Station Hill and the application site. In order to maintain the RSAF's recommendation for the allocated location of a Local Landmark, Plot D was reduced by 14 m, equating to four office storeys or five residential storeys, as shown in Figure 3.2.
- 3.40 Following extensive daylight and sunlight assessments, the height of the proposed development along Vastern Road was lowered to ensure no unacceptable impact on neighbouring properties. Additional guidelines relating to maximum building heights have been captured in the parameters development schedule to ensure that the tallest elements will not have an adverse effect on existing and future sensitive receptors. The Development Parameters restrict the width of tall elements. In addition, use related height parameter plans were developed following additional daylight and sunlight assessments to ensure that different scenarios are individually covered for schemes coming forwards at reserved matters stage.

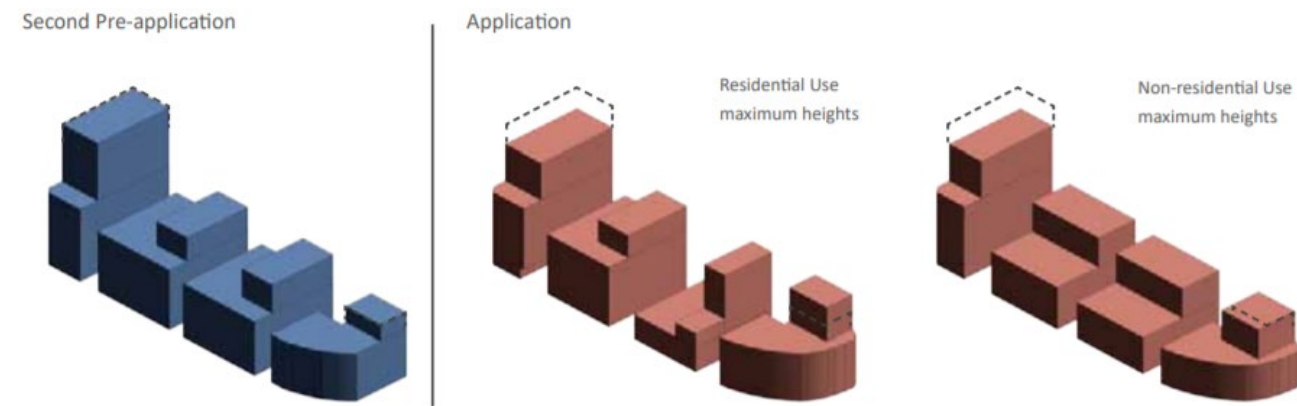


Figure 3.2: Alternative Heights of Plot D

Alternative Materials

3.41 Due to the outline nature of the proposed development, alternative materials were not explored for this stage of the planning process. A Design Code has been developed to support the planning application for the proposed development and would inform the detailed design.

Public Engagement and Consultation

3.42 During the design process and in preparing the application, the Applicant carried out a programme of statutory and community consultation.

3.43 The Applicant's approach to consultation comprised the following:

- Meetings with officers from the RBC and relevant statutory consultees; and
- Two public exhibition events undertaken on the 25 and 26 September 2019 and 30 and 31 October 2019.

3.44 The verbal and written feedback provided by local stakeholders as part of the consultation process has directly fed into the evolution of the proposed development.

3.45 A detailed description of the consultation undertaken is provided in the SCI appended to the supporting Planning Statement which accompanies the application.

3.46 In addition to public consultation, pre-application meetings were held with the RBC during the preparation of the planning application. Further information on design-related consultation can be found in the Design and Access Statement which accompanies the application.

Conclusion

3.47 The Applicant's objective for the proposed development is to provide a high-quality development supported by publicly accessible, open space to create an accessible, safe and sustainable urban extension.

3.48 Key environmental considerations informed the design evolution process, especially in the case of Daylight, Sunlight and Overshadowing and Townscape, Built Heritage and Visual.

3.49 No alternative sites were considered for the proposed development as the application site is owned by the Applicant and presents an opportunity to maximise the use of land in accordance with the NPPF.