

CHAPTER 4:

ALTERNATIVES CONSIDERED AND DESIGN EVOLUTION

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4.1 Introduction

- 4.1.1 Paragraph 2, Schedule 4 of the EIA Regulations requires the Applicant to provide “a description of the reasonable alternatives 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.”
- 4.1.2 This chapter describes the reasonable alternatives considered by the Applicant, including the ‘do nothing’ scenario, and documents how the design of the Proposed Development has evolved taking environmental effects into account.

4.2 ‘Do Nothing’ Scenario

- 4.2.1 The consideration of alternatives, as required by the EIA Regulations, should address the evolution of the Site in the absence of the development in question. This is known as the ‘do nothing’ scenario.
- 4.2.2 Historical mapping from 1761 shows the Site was used as arable farmland. Since the early 20th century the Site has been used as a golf course (Reading Golf Course), which removed much of the earlier landscape. The Site has remained relatively unchanged since then, remaining as a golf course with a clubhouse on Site.
- 4.2.3 The Site mainly supports the amenity grassland and many established trees that make up the golf course, mixed parkland and scattered trees, of site level importance. Supporting breeding birds including a nesting pair of Red Kites and bat species of greater conservation significance (Barbastelle bat and Nathusius pipstrelle) have also been recorded on Site.
- 4.2.4 Reading Golf Course has struggled with a decline in membership levels in recent years. The golf course is relatively small by modern standards and is constrained on all sides by existing development prohibiting its expansion or redevelopment as a golf club. However, the location of the Site on the urban fringe of Caversham in close proximity to number of amenities and very good connectivity to Reading makes the Site an attractive location for a potential change of use to residential. This has led to the Site being recognised as a location for development and change of use in Caversham and Emmer Green, Policy CA1b of the Local Plan.
- 4.2.5 Taking this into consideration the existing membership decided to re-locate to Caversham Heath Golf Club, whose facilities and course could be improved, thus ensuring that golf will continue in the area. The sale of the existing golf course at Emmer Green allows for the extension of the Caversham Heath course and its associated facilities and the delivery of the new residential housing in Reading.
- 4.2.6 Reading Borough Council (RBC) has a current housing provision target of 15,847 dwellings over the period 2013 to 2036 an annual average of 689 dwellings. This housing provision target will be met in part through the development of allocated sites such as this.
- 4.2.7 The development of this Site provides an opportunity to provide the following:
- a landscape led, sustainable development, that sits alongside the existing area of Emmer Green and the wider area of Reading, that will provide much needed new housing;
 - a high quality design that will deliver a mix of housing (including affordable units), community and recreational facilities as well as various open spaces and landscape features that will integrate with existing green spaces. The proposals will encourage

pedestrian permeability whilst providing areas and margins for enhancing the existing ecology and bio-diversity; and

- the adoption of best practice principles and good design solutions that revolve around creating a legible scheme that reflects local needs (as identified by Reading Borough Council) and also the landscape character of this part of Reading and the wider area.

4.2.8 The Proposed Development of up to 260 houses, of which 30% are affordable, and 850m² of non-residential institution space in the form of a health centre would assist RBC in achieving their housing provision target whilst helping to address concerns regarding facilities and population growth, recognised in the newly adopted Local Plan¹.

4.2.9 In absence of the Proposed Development, these benefits wouldn't be realised and it is likely that Reading Golf Course would cease to operate and the land would likely stay vacant until such a time where an alternative development option came forward and the Site was developed in accordance with its allocation.

4.3 Alternative Sites

4.3.1 Alternative locations for the Proposed Development have not been considered given that the Site has been partly allocated for housing in Caversham and Emmer Green, Policy CA1b of the RBC Local Plan, and due to the unique circumstances outlined above. In these circumstances whereby alternative locations are not explored it is an accepted approach to look at the reasonable alternatives studied by the developer on the Site; this can include design options and iterations.

4.3.2 The Proposed Development satisfies the key principles of requirements on the Site as stated in the RBC Local Plan 2036 in the form of the provision of residential development, and a medical centre.

4.3.3 Therefore, the key principles of the Proposed Development are firmly derived from the RBC Local Plan. As such the Site is considered the most suitable option and therefore alternative sites have not been considered.

4.4 Alternative Uses for the Site

4.4.1 A Minerals Resource Assessment has been undertaken for the Site which concluded that the quantity of Black Park Gravel within the Site would not be sufficient to support on-site processing, and off-site processing would not be viable due to the high silt load and unacceptable environmental impacts to nearby residents. Further information is provided in **Chapter 3: EIA Methodology**.

4.5 Consideration of Design Iterations and Design Evolution

4.5.1 The design development process is described in further detail in the Design and Access Statement (DAS) which has been submitted in support of the Application. A summary of the key principles behind the evolution of the design and the main alternatives considered is provided below.

4.5.2 No significant amendments to the red line boundary have been considered during the design evolution of the Proposed Development so that the Site is in line with the partial

¹ Reading Local Plan 2013 – 2036 (November 2019) Section: 9.3.14

existing allocation. However, the design has evolved as a detailed understanding of the site constraints have been developed which have influenced the illustrative layout. This in combination with regular consultation with RBC through the pre-application process has developed an understanding of RBC's requirements for the Site which in turn have influenced the illustrative proposals.

- 4.5.3 The overall site area enclosed in the red line boundary is approximately 12.15 hectares of which c. 3.83 ha are allocated by way of Policy CA1b in the Local Plan. There is an additional 30 ha of the Golf Course which will not be developed within South Oxfordshire District Council. There are a number of constraints that affected the developable areas including important trees and landscape margins, ecological factors, drainage issues, as well as the need for road, cycle and footpath legibility and permeability.
- 4.5.4 The design development process principally revolved around the retention of existing trees and landscape features, which are an important part of the Site as outlined in the Opportunities and Constraints Plan in **Figure 4.1**. This has taken account of the constraints and opportunities presented by the Site. The key constraints include:
- existing landscaping;
 - site access;
 - need to preserve existing mature trees;
 - management of existing trees and hedgerows along all boundaries;
 - proximity, amenity and relationship of existing dwellings;
 - need to accommodate surface water drainage;
 - residential amenity of those living immediately in the vicinity of the Site; and
 - existing foul water sewer.

Figure 4.1 Opportunities and Constraints Plan



- 4.5.5 The site analysis identified the most appropriate areas for potential development whilst retaining the key landscape, arboricultural and ecological features whilst making the most effective use of land identified as being suitable for development.
- 4.5.6 A density study was undertaken to establish the most appropriate locations within the Site for a range of densities to provide a balance of a good use of the developable areas against the retention of important trees and landscape features. **Figure 4.1** shows how the density of development could be appropriately spread across the Site.

Design Strategy, Access & Pedestrian Routes

- 4.5.7 **Figure 4.1** also shows the movement strategy for the Site. Vehicular access for the new development will be via the creation of a new primary access off Kidmore End Road. There will be a further access point located on the northern side of the road frontage which will provide an access position for the Fire Brigade or any other emergency vehicles. It is not envisaged that this will be for general access. This is also the location for the footpath link that runs through the site on the northern and eastern sides, linking Kidmore End Road with the South Oxfordshire parcel of the golf club's land.
- 4.5.8 There is the opportunity to run both footpaths and cycle routes through the scheme, both formally alongside the spine street and informally through the landscaped margins on the north and eastern boundaries and through the central area that contains apartments.

Initial Layout

- 4.5.9 The proposals show the retention of a large proportion of the existing trees and boundary screening and these are features that informed the approach taken to the layout as they are key parts of the sites' 'infrastructure'.
- 4.5.10 This is demonstrated in the linear landscape area that runs along the northern and north eastern boundaries, connecting Kidmore End Road with the South Oxfordshire parcel of the golf club's land. This key link incorporates a number of the most important tree specimens, particularly on the area around the 'elbow' where the land turns and heads north which contains a large number of high value trees and establishes where the scheme changes direction providing road structure and enables a large area of public open space to be created with a LEAP.
- 4.5.11 The retention of the trees and landscape features across the whole site will provide a green backdrop to the proposed homes, incorporating them into the spaces between the trees.
- 4.5.12 The priority was to retain the existing trees whilst enhancing with additional structural and domestic planting that will ensure that the form of the layout continues to be landscape led.

Figure 4.2 Initial Layout



- 4.5.13 There are several elements to the layout shown. The frontage units to Kidmore End Road sit back from the road and this allows for a softened, landscaped area that accords with the neighbouring pattern. There is an exception to this set-back arrangement with a 'lodge' style homes positioned near to the frontage which will help denote the entrance to the scheme.
- 4.5.14 Further into the Site it is proposed medical facility/surgery be located - with flats above the facility. This sits just to the south east and contributes to this part of the scheme being its focal point.
- 4.5.15 To the north the initial layout shows two distinctly different areas of possible development. On the western side there is an area of lower density housing that sits amongst the tree belt between the current fairway division and the dense boundary screening. This area is suitable for a reduced density as the trees are a natural constraint and the neighbouring houses set closer to the common boundary. The balance of the proposed development in this area sees flats at the centre of an area that is surrounded by either typically detached or semi-detached houses that are constrained by the perimeter roadway. This containment provides buffering to landscape features and existing trees and creates a legible developed area.
- 4.5.16 The scheme subsequently evolved to take into consideration certain design constraints such as the main sewer running across the Site, retention of a higher number of high value trees and the identification of suitable geology for soakaways.

Figure 4.3 Layout Development



Amenity

- 4.5.17 Family homes, such as large 3 bed houses, 4 and 5 bed houses will usually warrant a larger rear garden than smaller 3 bed houses, 2 bed and 1 bed houses/flats. Therefore, it is proposed family homes will have larger rear gardens whereas smaller dwelling houses will have approximately 50 sq m of rear garden area. Achieving large rear gardens for small dwelling houses usually creates a slightly impractical garden shape as the smaller dwellings are predominantly narrow which presents the dwelling with a long thin plot.
- 4.5.18 The area of Emmer Green contains a small degree of locally distinctive examples of housing development. The scheme design will therefore be required to reflect the local vernacular, traditional forms, yet may establish its own character in relation to good design objectives.
- 4.5.19 The setting of the built form is of a relatively medium density with varying building setbacks. However, the discernible openness of the existing dwellings fronting Kidmore End Road should be reflected on the site frontage within the Site.
- 4.5.20 Therefore, the units fronting Kidmore End Road have been set-back significant from the road behind the retained tree planting. This will ensure the character of Kidmore End Road in this locale is retained.

Sustainable Urban Drainage Systems (SuDS)

- 4.5.21 The new development will accommodate all storms up to a 100-year return period and anticipate a 30% increase in rainfall intensity as recommended by the NPPF in climate change terms.
- 4.5.22 The Ground Investigation has identified opportunities for soakaway drainage for the disposal of surface water flows generated from the Proposed Development. The surface

water flows will primarily be directed via piped sewers to 2 infiltration (SuDS) ponds located in the northern area of the Site. The ponds will ordinarily be dry landscape features sensitively incorporated into the wider landscaping for the Site and will also be designed additional POS areas to benefit the development. A secondary attenuation pond will be located in the area of low ground permeability in the centre of the Site, this will be designed to be a 'wet' pond providing both additional surface water storage for the development and ecological enhancement for the development.

Further details on the surface water, flood risk and drainage strategy can be found in the supplementary reports accompanying this ES: **Volume 4: Appendix D1: Flood Risk Assessment**; and **Volume 4: Appendix D2: Outline Sustainable Drainage Systems (SuDS) Strategy**.

Final Layout Development

- 4.5.23 **Figure 4.4** shows the final layout as submitted. Further revisions to the layout aimed to increase the number of residential units on the Site from 250 to 260, to bring the health centre to the Site frontage, better secure the perimeter with existing housing, provide a rear pedestrian access to Emmer Green Primary School and open up the centre of the Site for green space without reductions in open space and while still retaining the same drainage strategy and ecological enhancements.

Figure 4.4 Final Site Layout



Environmental Considerations and Comparison of Effects

- 4.5.24 Throughout the design development various layout iterations were explored between maximising the development potential of the Site and retaining key landscape features such as the high value trees and boundary vegetation whilst maximising the public open space and incorporating the opportunity to introduce attractive ecological amenity space.
- 4.5.25 As outlined above ground investigation highlighted opportunities for soakaway drainage for the disposal of surface water flows generated from the Proposed Development. This enabled the reduction in the size of attenuation ponds and allowed flexibility in their location. The movement of the sewer to the boundary of the Site allowed the development potential to be maximised whilst retaining key landscape features and providing the opportunity for ecological enhancement.

4.6 Summary and Conclusions

- 4.6.1 Reading Golf Course has a declining membership and constraints prohibiting its expansion or redevelopment as a golf course making viability increasing more difficult therefore the existing membership decided to re-locate to Caversham Heath Golf Club, whose facilities and course could be improved, thus ensuring that golf will continue in the area. The sale of the existing golf course at Emmer Green allows for the extension of the Caversham Heath course and its associated facilities and the delivery of the new residential housing in Reading.
- 4.6.2 The Site is partially allocated for housing in Caversham and Emmer Green, Policy CA1b of the Local Plan and presents an opportunity to provide a landscape led sustainable development, that sits alongside the existing area of Emmer Green and the wider area of Reading, that will provide much needed new housing.
- 4.6.3 The Proposed Development of up to 260 houses, of which 30% are affordable, and 850 m² of non-residential institution space in the form of a medical centre would assist RBC in achieving their housing provision target whilst helping to address concerns regarding facilities and population growth, recognised in the newly adopted Local Plan².
- 4.6.4 In absence of the Proposed Development, these benefits wouldn't be realised and it is likely that Reading Golf Course would cease to operate and the land would likely stay vacant until such a time where an alternative development option came forward and the Site was developed in accordance with its allocation.
- 4.6.5 Alternative locations for the Proposed Development have not been considered given that the Site has been partially allocated and due to the unique circumstances outlined above.
- 4.6.6 No amendments to the red line boundary have been considered during the design evolution of the Proposed Development so that the Site is in line with the partial existing allocation. However, the design has evolved as a detailed understanding of the site constraints have been developed which have influenced the illustrative layout.
- 4.6.7 The design development process principally revolved around the retention of existing trees and landscape features. This has taken account of the constraints and opportunities presented by the Site. The key constraints include:

² Reading Local Plan 2013 – 2036 (November 2019) Section: 9.3.14

- existing landscaping;
- site access;
- need to preserve existing mature trees;
- management of existing trees and hedgerows along all boundaries;
- proximity, amenity and relationship of existing dwellings;
- need to accommodate surface water drainage;
- residential amenity of those living immediately in the vicinity of the Site; and
- existing foul water sewer.

4.6.8 Throughout the design development various layout iterations were explored between maximising the development potential of the Site and retaining key landscape features such as the high value trees and boundary vegetation whilst maximising the public open space and incorporating the opportunity to introduce attractive ecological amenity space.