

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 struggled with a decline in membership levels in recent years. The golf course was relatively small by modern standards and 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 homes), 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 223 houses, of which 68 (30%) are affordable would assist RBC in achieving their housing provision target whilst helping to address concerns regarding facilities and population growth, recognised in the 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 partial 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 existing allocation. However, the design has evolved as a detailed understanding of the site

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

constraints have been developed which have influenced the proposed layout, through feedback on the previous planning application and through subsequent pre-application discussions with RBC.

- 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 Constraints Plan and Movement Plan in **Figures 4.1 and 4.2**. This has taken account of the constraints presented by the Site.
- 4.5.5 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 Constraints Plan

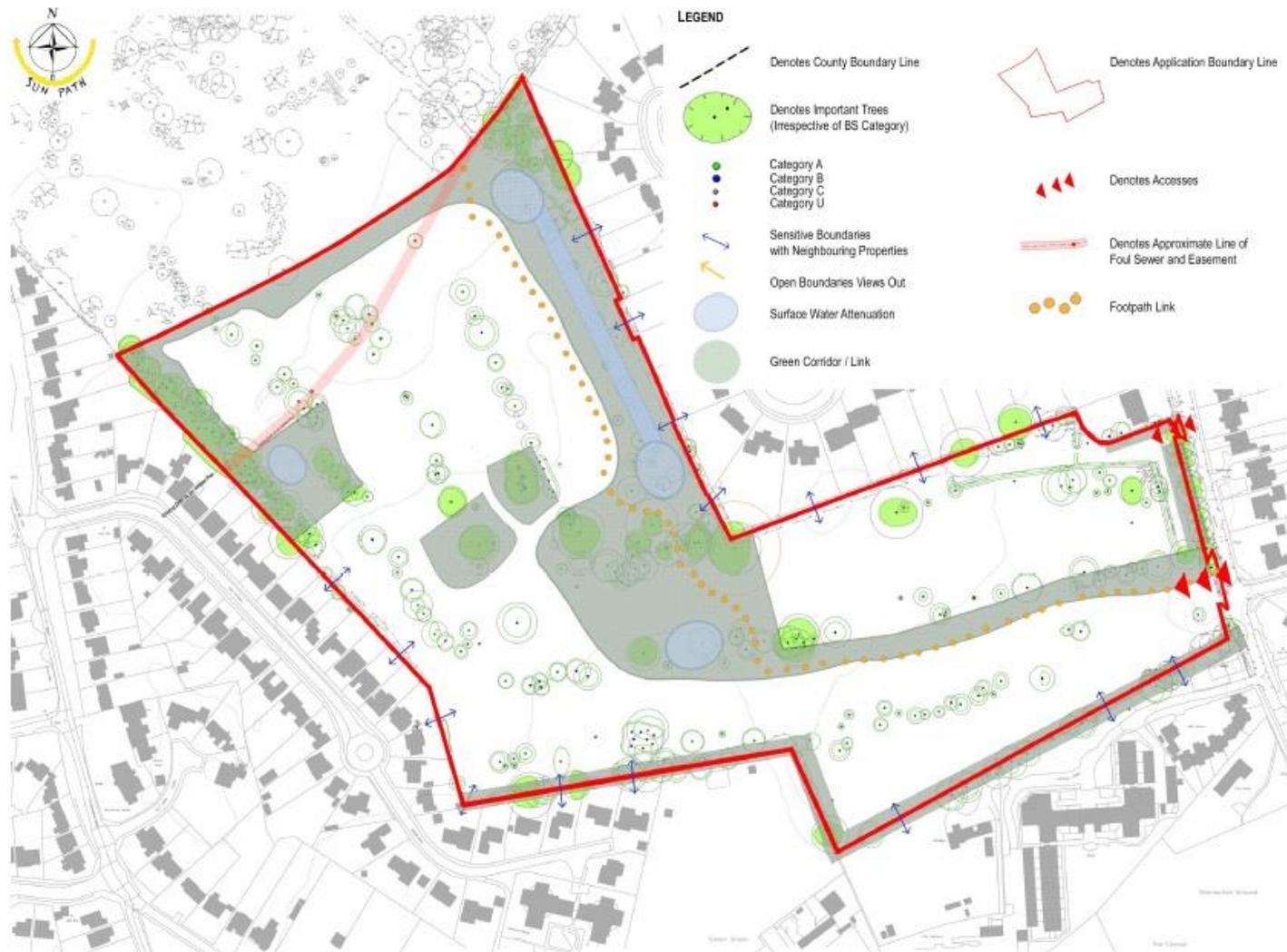


Figure 4.2 Movement Plan



- 4.5.6 The site analysis identified the most appropriate areas for potential development whilst retaining the key landscape, arboriculture and ecological features whilst making the most effective use of land identified as being suitable for development.
- 4.5.7 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.

Design Strategy, Access & Pedestrian Routes

- 4.5.8 **Figure 4.2** 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.
- 4.5.9 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

- 4.5.10 The proposals retained a large proportion of the existing trees and boundary screening.
- 4.5.11 This is demonstrated in the linear landscape area that runs along the northern and north eastern boundaries in the initial layout, 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.
- 4.5.12 The retention of the trees and landscape features across the whole site provided a green backdrop to the proposed homes, incorporating them into the spaces between the trees.
- 4.5.13 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 continued to be landscape led.
- 4.5.14 Buildings were set back from Kidmore End Road with landscaping between these buildings and the road, to match the openness along the rest of the road. The western side of the Site had a reduced housing density due to the trees to be retained.

Figure 4.3 Initial Layout



- 4.5.15 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.

Sustainable Urban Drainage Systems (SuDS)

- 4.5.16 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.
- 4.5.17 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 infiltration (SuDS) ponds. For the previous application (as shown in **Figure 4.4**) these included 'dry' ponds located in the north-western area of the Site, and a 'wet' pond located in the centre of the Site providing both additional surface water storage for the development and ecological enhancement for the development.
- 4.5.18 Further ground investigation has resulted in amendments to drainage strategy, due to the potential for solution features and low infiltration rates at particularly locations. The main infiltration basin has now been moved into the north eastern corner of the Site which has good infiltration rates this is fed through underground pipes from the west and a lined swales from the south linking two smaller lined storage ponds. An additional lined basin is

area and aids biodiversity, ecological enhancements and wildlife corridors in response to comments made by Conservation Officers

- 4.5.23 A substantial depth of planting and green space now runs along the Kidmore End Road boundary, adding an area of differing pattern as suggested by RBC's Design Review Panel. There is a deeper landscaped buffer area of green space between the road and the northern boundary to create a softer settlement edge and a clear distinction between urban and rural.
- 4.5.24 In addition, since the previous application was submitted it has become clear that Emmer Green Surgery wish to improve their existing facility rather than relocate their practice to the Proposed Development. Therefore, the health centre has been removed from the Proposed Development, and the previous health centre with 34 flats above has been replaced by a terrace of 10 houses.
- 4.5.25 Since the previous application, the Energy Strategy has been revised in light of new policy to achieve carbon reductions. The Energy Strategy for the Proposed Development now reduces carbon emissions from regulated energy to 85% (previously 45%), the maximum amount of technically feasible savings for the type and location of development.

Figure 4.5 Final Layout

Environmental Considerations and Comparison of Effects

- 4.5.26 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.

- 4.5.27 As outlined above further ground investigation highlighted constraints with the locations for infiltration basins for the disposal of surface water flows generated from the Proposed Development. This has resulted in new locations for the basins, a reduction in their overall surface area increasing the amount of open space provision. This combined with the reduction in the number of homes has enabled key landscaping features to be maximised providing the opportunity for ecological enhancement.
- 4.5.28 The changes to the design of the scheme has resulted in increased planting and the addition of a greater number of new trees, also the replacement of flats with house has increase the amount of private amenity space available.
- 4.5.29 In addition, the reduction in residential homes from 260 to 223 has resulted in a slight reduction in demand for facilities such as health care, education, childcare, leisure and open space compared to the previous application, whilst the overall changes have not resulted in a change to the overall significance of the effects. However, there is now a need for contributions from the Developer towards healthcare facilities to mitigate the additional demand from new residents on healthcare, in the absence of a healthcare facility provided on site.
- 4.5.30 Fewer houses will be provided, reducing the contribution to housing and affordable housing provision when compared to the previous scheme, and reducing the indirect impact on the economy due to increased spend in the local area.
- 4.5.31 The revised Energy Strategy includes an increase in the proposed levels of insulation and solar panels which would reduce the carbon emissions of the Proposed Development and therefore the impact of the Proposed Development on the global climate.
- 4.5.32 There would be a slight reduction in traffic generated by the reduced number of residents on Site, and due to the removal of the health care centre. However, this reduction is not considered to be of sufficient scale to alter the conclusions of the Traffic and Transport, Air Quality or Noise and Vibration assessments.

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 223 houses, of which 30% are affordable 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.

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

- 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:
- 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.
- 4.6.9 Since the previous application, amendments to the scheme include a reduction in the number of houses and an increase in public open space, further highways improvements and removal of the proposed health centre. This means that the Proposed Development compares favourably with the previous application in terms of landscape and visual impact, ecology, impact on community facilities, and traffic levels. However, fewer houses will be provided and the Proposed Development would lead to less additional expenditure in the local economy compared with the previous application. The loss of the health centre from the Proposed Development means that developer contributions will be required to mitigate the increased demand from new residents.