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Fairfax (Reading) Ltd & Reading Golf Club Ltd
Reading Golf Club, Emmer Green
Environmental Statement Volume 1
Non-Technical Summary



Document version control

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1.0 Introduction

- 1.1.1 This document is a Non-Technical Summary (NTS) of the Environmental Statement (ES) prepared on behalf of Fairfax (Reading) Limited (“Fairfax”) and Reading Golf Club Ltd. (“the Applicants”), who intend to submit an outline planning application (“the Application”) for a residential led development (“the Proposed Development”) at Reading Golf Course, Emmer Green (“the Site”). The determining planning authority for the outline application is Reading Borough Council (RBC).
- 1.1.2 The Site is 12.15 ha in area; it is located at Ordnance Survey (OS) National Grid Reference SU715767. The Site forms part of the southern section of Reading Golf Course and is located wholly in the Reading Borough Council administrative area, with the South Oxfordshire District to the north of the Site beyond the Site boundary.
- 1.1.3 The application Site is shown by the redline boundary in **Figure 1.1**. The blue line in this figure shows the wider Reading Golf Course Site, which does not form part of this application. The indicative Proposed Development layout is shown in **Figure 1.2**.
- 1.1.4 Outline planning permission is being sought for a residential-led scheme, including homes (C3 use class) and the provision of a health centre (D1 use class), associated open space and landscaping, vehicle parking, pedestrian, cycle and vehicular access, highway works and associated infrastructure. The indicative Proposed Development will comprise up to 260 homes (of a range of unit sizes and tenure) and 850 m² (GEA) allocated for community use intended as a health centre (subject to agreement with the NHS Primary Care Trust).
- 1.1.5 The predominantly residential area of Emmer Green is the northern most suburb of Reading, situated approximately 3 km north of Reading City Centre. Beyond Emmer Green to the north is the Chiltern Hills Area of Outstanding Natural Beauty (AONB), and to the south is the town of Caversham.

Figure 1.1: Red Line Site Boundary

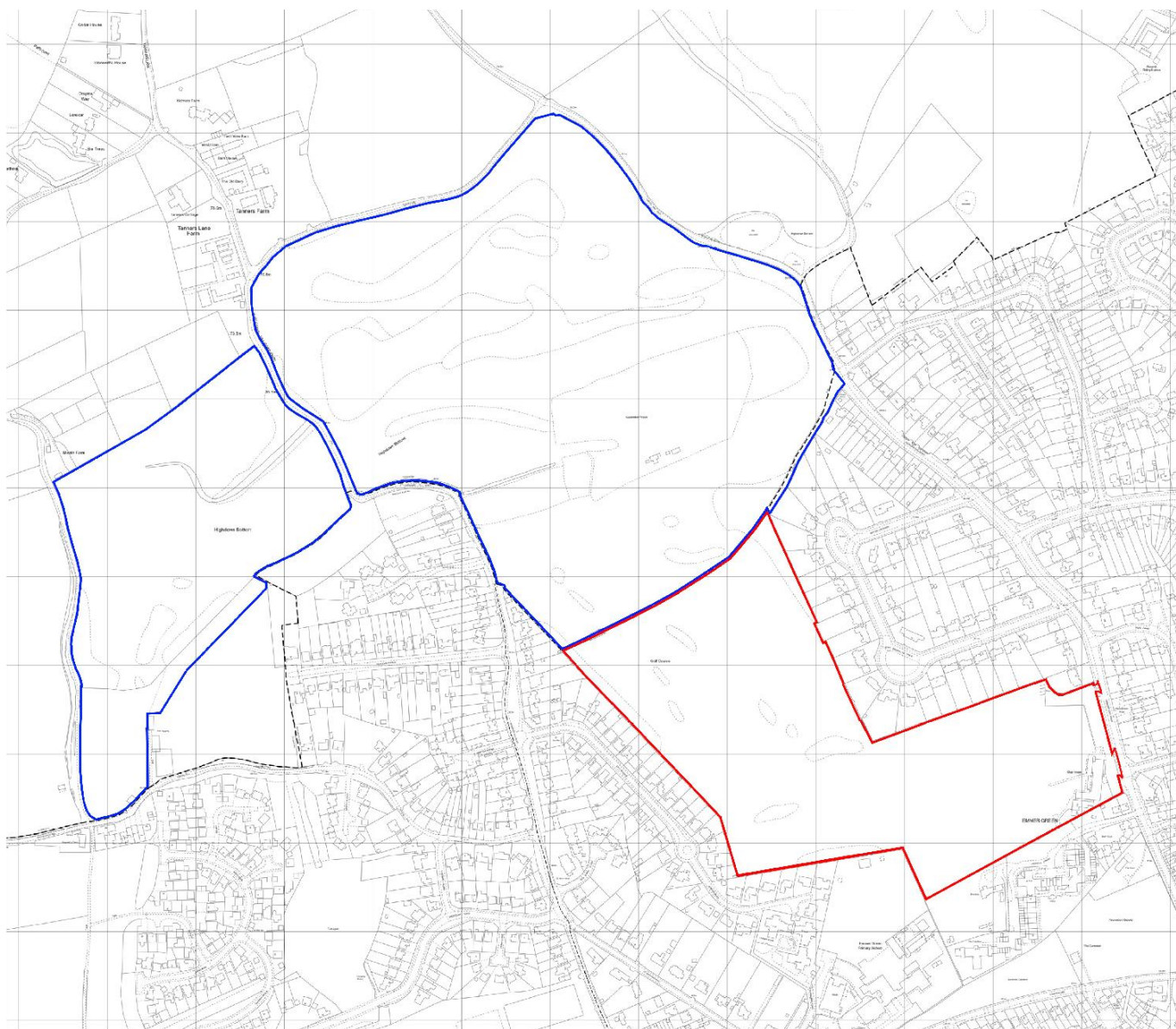


Figure 1.2: The Proposed Development



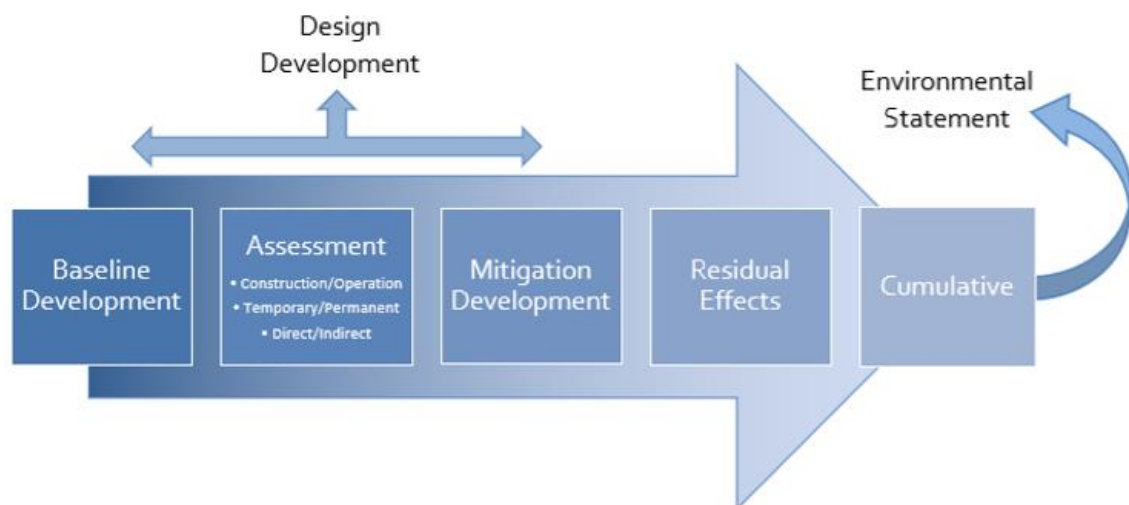
2.0 Environmental Impact Assessment

- 2.1.1 Under the Town and Country Planning (Environmental Impact Assessment) Regulations 2017, SI 2017/571 (“the EIA Regulations”) an Environmental Impact Assessment (EIA) is required to support the planning application for a development of the scale and nature proposed.
- 2.1.2 EIA is a process used to ensure planning decisions are made with full knowledge of a proposed development’s likely significant effects. It helps to ensure that any effects are reduced or prevented, whilst encouraging the enhancement of positive effects. The Proposed Development has been assessed with particular consideration to the existing use of the Site, adjacent land uses, planning policies and law, the need for the development and the effects during construction and during use.
- 2.1.3 An ES is a report which describes the EIA process and its findings. The NTS (this document) is designed to convey key information to enable the public to understand and assess the Proposed Development and the potential impacts. It provides a non-technical summary of the ES (**Volumes 2, 3 and 4**) that accompanies the planning application.
- 2.1.4 The ES is split into four volumes as follows:
- Volume 1: Non-Technical Summary (NTS) – this document, which is provided as a standalone document but also forms Volume 1 of the ES.
 - Volume 2: Main Text – contains the main text of the ES and should be read in conjunction with Volume 3.
 - Volume 3: Landscape and Visual Impact Assessment (LVIA) – this document provides an assessment of the townscape and visual effects of the Proposed Development and is accompanied by visualisations.
 - Volume 4: Technical Appendices – the appendices to the ES, including additional information, data and figures.
- 2.1.5 Due to the coronavirus pandemic, temporary amendments have been to the Development Management Procedure Order 2015 and the 2017 EIA Regulations to enable planning and other applications to be advertised electronically. Therefore the ES is available for viewing online at [Reading Borough Council’s website](#).
- 2.1.6 Copies of the NTS, the main ES, and other associated documents are available (subject to availability) to purchase as either hard or digital copies from Temple Group Ltd., The Woolyard, 52 Bermondsey Street, SE1 3UD. Further details, including pricing, are available on request.

3.0 Assessment Approach

- 3.1.1 The general approach to assessing environmental impacts and effects is to consider the current conditions on and around the Site for each environmental issue, and then to compare them with the predicted conditions during the construction and operational phases of the Proposed Development. Where there are international, national or local standards, policies or guidelines of relevance to these proposals, these are also taken into account.
- 3.1.2 In order to assess the potential impacts and effects of the Proposed Development on the environment, the sensitivity of existing resources (or receptors¹) are considered in conjunction with the scale (or magnitude) of the predicted impacts to establish the significance of the predicted effects. These are categorised as Major, Moderate, Minor or Negligible and effects greater than Minor are generally considered to be significant.
- 3.1.3 Mitigation measures are proposed to reduce the significance of an effect. The effect is then reassessed to identify if the effect has been fully mitigated and the likely remaining (residual) effect, if any.
- 3.1.4 Each topic area takes this same general approach to assessment, as outlined in **Figure 2.1**

Figure 2.1: The Assessment Process



- 3.1.5 **Section 5** sets out the findings of the EIA process. The order of topic sub-sections matches the order in which they have been considered in **Volume 2** of the ES.
- 3.1.6 It was agreed with RBC which topics would be scoped in and out of the EIA. These are as follows:

Scoped In

- Socio-Economics;
- Traffic and Transport;

¹ Receptors could include people and ecological receptors (both animals and plants). They are evaluated in terms of their value and their sensitivity or susceptibility to likely changes.

- Air Quality;
- Noise and Vibration;
- Water Resources and Flood Risk;
- Ecology;
- Archaeology and Built Heritage;
- Climate Change and Greenhouse Gas Emissions; and
- Landscape and Visual Impact Assessment (**Volume 3**).

Scoped Out (as individual topic chapters)

- Aviation;
- Daylight, Sunlight and Overshadowing;
- Ground Conditions and Contamination;
- Major Accidents and / or Disasters;
- Population and Human Health;
- Waste and Recycling; and
- Wind Microclimate.

3.1.7 Topics were scoped out of the ES on the basis that they are unlikely to result in significant environmental effects. Further detail can be found in **ES Volume 2: Chapter 3 EIA Methodology**.

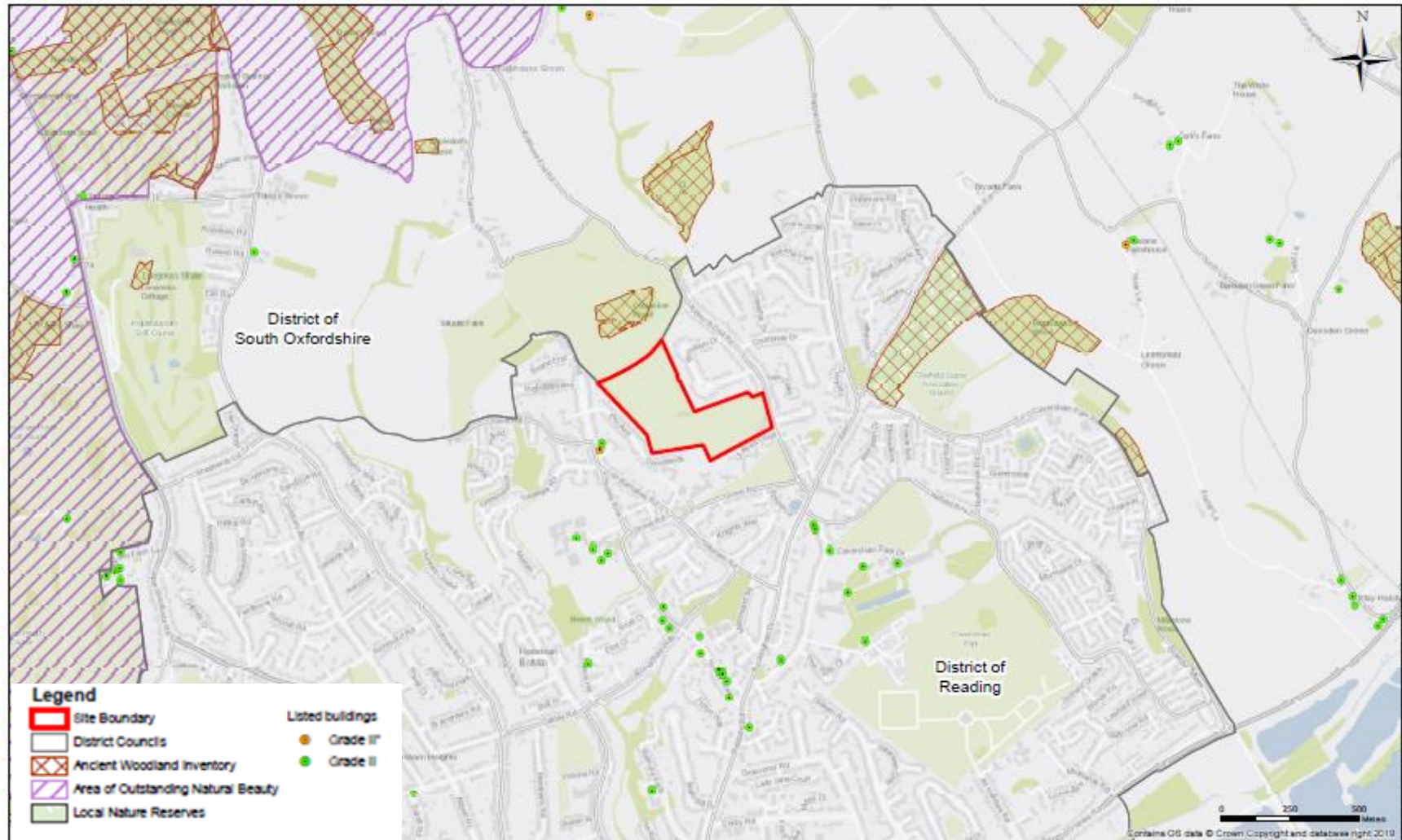
3.1.8 In addition to assessing the effects arising from the Proposed Development in isolation, those additional effects (referred to as cumulative effects) arising from the Proposed Development in conjunction with other committed developments in the vicinity of the Site have also be assessed.

4.0 The Site

4.1 Site Context

- 4.1.1 The Site is approximately 12.15 ha. It is located at Ordnance Survey (OS) National Grid reference SU715767. The location of the Site can be seen in its wider geographical context in **Figure 3.1**.
- 4.1.2 The Site is located in a residential area of Emmer Green, 3 km to the north of Reading. Peppard Road and Emmer Green provide access northwards to Sonning Common and Henley-on-Thames. Peppard Road also extends southwards towards Reading. The 23, 24 and 25 bus routes serve the area surrounding the Site, providing access to Reading, Caversham and the wider Emmer Green area.
- 4.1.3 The main sources of noise that can be heard on the Site, and from houses nearby, are road traffic from the surrounding road network and occasional overhead aircraft. The Site is not located within an Air Quality Management Area (AQMA). The nearest AQMA to the Site is the Reading AQMA which is designated for high levels of nitrogen dioxide (NO₂) pollution, approximately 1.7 km to the south.
- 4.1.4 The Site is within a Site of Specific Scientific Interest (SSSI) Impact Risk Zone – the Site is circled by 7 designated SSSIs and a Special Area for Conservation (SAC), however all of these are at least 5 km from the Site boundary. Reading Golf Club (East) Local Wildlife Site (LWS) exists 100 m to the north within the wider landholding of Reading Golf Course. Areas of Ancient Woodland and Replanted Woodland are also present in the landscape to the north (namely Cucumber Wood within the wider Golf Course site).
- 4.1.5 There are no designated heritage assets within the Site, although there are Grade II listed buildings in close proximity to the south of the Site, approximately 200 m west of the southern area along Highdown Hill Road. There are 4 further Grade II Listed Buildings within a 1 km radius of the Site.
- 4.1.6 There are no scheduled monuments on or near the Site, and there are no known non-designated heritage assets within the Site. The only building present on the Site is the existing golf clubhouse. The Site is not located within an area of archaeological interest.
- 4.1.7 The Site is within Flood Zone 1, which is an area of land assessed as having a less than 1 in 1,000 annual probability of river or sea flooding (<0.1%). There are no water courses present or near the Site. However, there are areas susceptible to surface water flooding. In particular, there is an area of high risk towards the centre of the Site.
- 4.1.8 **Figure 3.1** shows the Site location, the surrounding context and site constraints.

Figure 3.1: Site Context and Constraints



5.0 Proposed Development

5.1 Alternatives Considered

- 5.1.1 The EIA Regulations requires the Applicant to provide “*a description of the reasonable alternatives studied by the developer.*” This section describes the reasonable alternatives considered by the Applicants, including the ‘do nothing’ scenario, and documents how the design of the Proposed Development has evolved taking environmental effects into account. These are provided in full in Chapter 4 of the ES and summarised below.

‘Do Nothing’ Scenario

- 5.1.2 The consideration of alternatives should address how the Site would continue to be used in the absence of the Proposed Development. This is known as the ‘do nothing’ scenario.
- 5.1.3 The Site was historically used as arable farmland and then, since the early 20th century until the present day, as a golf course. The habitats on the Site consist of amenity grassland, mixed parkland and scattered trees. The golf course supports a nesting pair of red kites; Barbastelle and Nathusius pipistrelle bats have also been recorded on Site.
- 5.1.4 The golf course faces viability challenges due to its small size and a decline in membership. It has good potential for a change of use to residential due to its location on the urban fringe of Caversham, near a number of amenities and with very good connectivity to Reading, and this has been recognised in Caversham and Emmer Green, Policy CA1b of the Reading Borough Council Local Plan.
- 5.1.5 Without development, Reading Golf Club would likely cease to operate and the Site would stay vacant until an alternative development option came forward.
- 5.1.6 Golf activities would continue in the area at the nearby Caversham Heath Golf Club, but without the sale of the land this club would not be extended and improved.
- 5.1.7 Without development, this would not contribute towards RBC’s current housing provision target of 15,847 dwellings over the period 2013 to 2036 with an annual average of 689 dwellings.
- 5.1.8 Alternative sites for this development have not been considered due to the housing allocation and the circumstances outlined above.

Design Evolution

- 5.1.9 There have been no major changes to the Site boundary throughout the design evolution of the Proposed Development.
- 5.1.10 The key constraints considered in the initial layout were:
- 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.
- 5.1.11 **Figure 4.1** shows the opportunities and constraints considered in the original masterplan.
- 5.1.12 Because of the location of the trees to be retained, and the access at Kidmore End Road, it was decided that a higher density of housing would be provided at the south-eastern corner of the development as shown in **Figure 4.1**.

Figure 4.1 Opportunities and Constraints on the Site



- 5.1.13 The initial layout (**Figure 4.2**) was informed by the landscape, the desire to retain existing trees and to create an area of open and play space, and to maximise the developable area.

Figure 4.2 Initial Layout



- 5.1.14 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.
- 5.1.15 The units fronting Kidmore End Road were further set-back from the road behind the retained tree planting to ensure the character of Kidmore End Road is retained.
- 5.1.16 The drainage strategy was at this point integrated into the design. Surface water flows will primarily be directed via pipes to four infiltration (SuDS) ponds located in the northern area of the Site. Therefore, space has been made for these drainage areas in the final layout.
- 5.1.17 Finally, houses were further reoriented and more semi-detached homes were provided, which led to an increase in homes to 260 despite an overall reduction in built floorspace.
- 5.1.18 These design evolution steps led to the final layout as shown in **Figure 4.3**.

Figure 4.3 Final Layout



Comparison of Environmental Effects

- 5.1.19 The soakaway drainage for the disposal of surface water flows generated from the Proposed Development 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.

5.2 Proposed Development

Land Use Mix and Areas

- 5.2.1 The Proposed Development will comprise of one development phase, predominated by residential buildings located within publicly accessible open space, **Figure 1.2**. It is anticipated the Site will be developed from the south east boundary, moving eastwards and then northwards.
- 5.2.2 **Table 4.2** below presents the breakdown of areas by land use type within the Proposed Development.

Table 4.2: Illustrative Areas by Building Use Class or Land Use

Use Class	Maximum Gross Internal/External Area (GIA/GEA) m ²
C3 (residential)	24,548 (GIA)
D1 (Non-institutional residential)	850 (GEA)

- 5.2.3 The dwelling and tenure mix for the Proposed Development is sympathetic to the Reading Local Plan (2019) and the requirements of Policy H3 30% of the units provided will be affordable housing. **Table 4.3** shows the illustrative dwelling mix for the Proposed Development.

Table 4.3: Illustrative Dwelling Mix

	Social rent	Intermediate/affordable	Private	Total
1 Bed Flats	7	3	22	32
2 Bed Flats	5	2	17	24
2 Bed Houses	9	4	29	42
3 Bed Houses	17	7	57	81
4 Bed Houses	17	7	57	81
Total	55	23	182	260

Building Design

- 5.2.4 The 260 residential units include a range of dwelling types. As indicated in **Table 4.3**, these range from 1 bed flats to 4 bed detached and semi-detached houses. It is expected that the residential buildings will be no more than 2.5 storeys in height.
- 5.2.5 The total developable area on-site comes to circa 12.15 hectares, resulting in a gross housing density of approximately 21.4 dwellings per hectare.

Access and Parking

- 5.2.6 The Proposed Development will be accessed from two locations. The site access, from Kidmore End Road towards the south west of the Site, will form the primary access route. There will be an emergency access immediately to the north of the main entrance along Kidmore End Road.
- 5.2.7 An overall parking provision of approximately 485 spaces for residential use is proposed for the Site. Most of these spaces will be provided on driveways and within garages, all of which would have dedicated electric vehicle charging. A maximum of 77 spaces will be provided within communal parking areas to cater for residents of apartments who do not have access to a garage or driveway. 8 of these communal parking areas will have electric vehicle charging points. The total parking spaces includes a further 14 parking spaces for visitors.
- 5.2.8 Current RBC parking standards for health centres require the number of consulting rooms or staff in order to determine the number of parking spaces. Non-residential institutions (D1 use class) such as the proposed health centre require 3 parking spaces per consulting room + 1 parking space per FTE staff. The health centre has been assumed to have 5 treatment rooms and 10 FTE Staff, as such based on the RBC standards it is assumed that the facility will require 25 spaces.

Open Space and Landscaping Strategy

- 5.2.9 Open space on Site will be provided as publicly accessible open spaces. Planned areas of open space will be provided as part of the comprehensive scheme design along with designated areas of children's play. There will be a provision of 3.57 ha of public open space and amenity space as part of the Proposed Development. This number increases to just over 4 ha if the areas providing sustainable urban drainage (SuDS) support are included.

Energy and Sustainability Strategy

- 5.2.10 Compliance with targets set out in the Reading local Plan for major residential proposals to reduce regulated carbon has been demonstrated. With the Proposed Development expected to show a 43% reduction in regulated carbon emissions, in comparison to the 35% reduction target set out in the Local Plan.
- 5.2.11 Energy targets will be met via a mixture of passive measures, energy efficient fixed services and LZC technologies. Some of these measures include, exceeding good or best practice standards for thermal insulation and glazed elements, LED lighting throughout with enhanced controls where relevant, high efficiency heat recovery ventilation systems and a solar photovoltaic installation on site.
- 5.2.12 The Site will also be water and resource efficient through the implementation of water conservation appliances in dwellings, consideration of local rainwater collection for external irrigation and production of a Site Waste Management Plan (SWMP) to set good practice target waste benchmarks.

Drainage Strategy

- 5.2.13 Drainage on Site will be managed via sustainable urban drainage systems (SuDS). There is a good level of rainwater infiltration into the underlying White Chalk. Four infiltration basins located in the northern part of the Site will collect runoff and allow it to infiltrate into the rock. These basins will be able to take all the runoff, including an allowance for increased rainfall due to climate change.

5.3 Construction Overview

- 5.3.1 The construction of the Proposed Development is not anticipated to be undertaken in distinct phases. For the purposes of the assessment, it has been assumed that the residential construction will commence with houses at the south eastern end of the Site nearest Kidmore End Road and progressively work north westwards over the five-year construction timeframe.

Sequence of Design

- 5.3.2 Based on the project team's expertise and experience on similar projects, it is anticipated that the construction of the Proposed Development for a scheme of this scale is likely to take approximately 5 years to complete with an estimated start date of May 2021.

Description of Works

- 5.3.3 The construction of the Proposed Development will happen in the following sequence:

- Site Preparation and Enabling Work - Involving initial Site set-up; installation of temporary haul road; Site clearance; topsoil stripped and land re-profiled; and the Site will be secured using perimeter fencing with access / egress procedures put in place.
- Main Works - The main works (substructure and superstructure) will involve excavation for the building foundation. The superstructure works will involve the construction of the frame and envelope including upper floor and roof.
- Fit-Out and External Works - Once the external cladding and facade is progressed sufficiently for weatherproofing, the fit-out can commence. Fitting out works generally comprise mechanical, electrical and plumbing systems.

Site Working Hours

- 5.3.4 Site working hours are expected to be between 08:00 and 18:00 Monday to Friday and 08:00 to 13:00 on Saturdays. Restricted operations are proposed to continue outside of these hours with regulatory approval.

Construction Workers

- 5.3.5 Construction of the Proposed Development is estimated to generate 39 Full Time Equivalent (FTE) gross jobs, and 29 FTE net jobs.

Construction Traffic

- 5.3.6 **Table 4.4** shows the extent of the construction traffic associated with the Proposed Development. The table shows the estimated daily construction traffic movements whilst the Site is being built out.

Table 4.4 Construction Traffic – Expected Vehicle Numbers (round trips)

Development Phase	HGVs	Cars
Site Clearance	10-25	
Peak Construction	5-10	60
Normal Construction	5 – 10	
Total	5 – 35	60

- 5.3.7 The majority of journeys during construction will be through Reading to the A33 and M4, either via Caversham town centre and Caversham Bridge, or via Reading Bridge.
- 5.3.8 Further information on construction related traffic impacts and mitigation can be found in **ES Volume 2, Chapter 7: Traffic and Transport**.

Waste Strategy, Materials and Resource Use

- 5.3.9 A Site Waste Management Plan for the construction of the Proposed Development will be developed, maintained and regularly monitored. Wherever possible, the arisings will be dealt with in a manner that reduces their environmental impact and minimises potential re-use of materials.

6.0 Summary of Topic Assessments

6.1 Introduction

- 6.1.1 Environmental effects have been assessed for the construction phase and operational phase. Operational effects describe those that would exist after the Proposed Development has been built and is occupied and in use.

6.2 Socio-Economics

- 6.2.1 Chapter 6 of the ES assesses the likely effects of the Proposed Development on socio-economics.
- 6.2.2 There is a high demand for community facilities that is unlikely to be met within RBC. Housing, education (primary and secondary), open space, crime rates and the local economy have a moderate capacity to absorb change.
- 6.2.3 During construction, a minor beneficial effect on the local economy is anticipated due to the temporary increase in local spending from the construction workforce. All other anticipated effects during construction are considered negligible.
- 6.2.4 After completion of the Proposed Development a moderate-minor beneficial effect is anticipated due to the additional provision of housing. Minor beneficial effects are anticipated due to demand from the additional population for open spaces, improvements in supply of a skilled workforce to the local economy, and the spending of the additional population within the local economy. There is also anticipated minor adverse effects on the availability of primary school places and demand for community and leisure facilities. All other anticipated effects are considered negligible.
- 6.2.5 During construction, there are no embedded or additional mitigation measures proposed. Embedded mitigation measures after completion of the Proposed Development include a new on-site medical centre, provision of open and play space within the Proposed Development and a design and layout to prevent crime.
- 6.2.6 Additional measures during operation include Community Infrastructure Levy (CIL) contributions towards primary education and community facility provision in Reading Borough.
- 6.2.7 The only significant residual effect associated with the Proposed Development is the moderate – minor beneficial effect of the provision of additional housing.
- 6.2.8 Cumulative schemes in close proximity to the Proposed Development were assessed for cumulative effects. The schemes give rise to a significant, moderate to minor beneficial effect during construction on increased employment opportunities. During operation, significant cumulative effects include: a major to moderate beneficial effect due to increased housing supply, including affordable housing; and moderate to minor beneficial effects due to an increase in the skills levels of residents, impact on employment due to the increase in labour supply and spending of additional population within local economy. There would be moderate-minor adverse effects due to the impact of the new population on the demand for primary school places, and minor (not significant) adverse effects due to the increased demand for new secondary school places.

6.3 Traffic and Transport

- 6.3.1 The Site is located in a residential area with a well-connected network of streets with footways and footpaths providing access to local facilities, including Emmer Green local centre located an approximately 5-minute walk from the Site. RBC cycle routes provide connections to Reading Station and Town Centre.
- 6.3.2 The Site has good public transport accessibility to bus and rail services, with bus stops located adjacent to the Site, and Reading Rail Station located 3.3 km south of the Site.
- 6.3.3 The existing highway network surrounding the Site consists of single carriageway roads with footways and street lighting. Accident data obtained within the most recent 36-month time period shows that of the accidents recorded surrounding the Site, no accidents appear to have been caused by highway layout and there are no clusters or accident blackspots.
- 6.3.4 The Proposed Development is not expected to have any significant impacts in terms of traffic and transport during the construction phase. All effects would be negligible.
- 6.3.5 A Construction Environmental Management Plan (CEMP) will set out traffic arrangements and management practices to adopt in order to reduce the environmental effects of construction.
- 6.3.6 The Proposed Development is not expected to have any significant impacts in terms of traffic and transport during the operational phase. All effects would be negligible.
- 6.3.7 The Proposed Development will encourage walking and cycling within the Site as well as to surrounding local facilities by providing a cycleway along the main street and informal pedestrian footpaths within open space. A Residential Travel Plan will be implemented for the Proposed Development in line with the National Planning Policy Framework (NPPF).
- 6.3.8 The Proposed Development includes a new crossing of Kidmore End Road, to the north of Grove Road, which will improve access to the Emmer Green local centre for new residents at the development, and provide an improved walking route to the south towards Highdown School via Grove Road for residents on the eastern side of Kidmore End Road.
- 6.3.9 A mini roundabout arrangement has been designed at the junction of Kidmore End Road and Peppard Road to help better manage traffic flows and provide a form of traffic calming around the Emmer Green local centre and signalised pedestrian crossing on Peppard Road. An imprinted crossing is proposed at the exiting informal crossing point located on Kidmore End Road.
- 6.3.10 No significant impacts in terms of traffic and transport are expected in either the construction or operations phase as a cumulative result of the Proposed Development.

6.4 Air Quality

- 6.4.1 The Site is not located within an Air Quality Management Area (AQMA); the nearest AQMA is in Reading town centre.
- 6.4.2 Dust from construction activities has the potential to damage human health and property through soiling.

- 6.4.3 Construction dust would pose at worst a low risk to human health and a high risk to soiling property. Mitigation embedded in the Proposed Development to reduce the construction dust risk comprises IAQM best practice measures, secured through a CEMP. The overall risk would therefore be considered not significant.
- 6.4.4 Air quality effects from construction traffic are anticipated to be negligible and have not been assessed further.
- 6.4.5 The main embedded mitigation measure to reduce air quality effects from operational traffic is the inclusion of 10% electric charging points for parking on the Proposed Development. The traffic and transport mitigation measures outlined above will also help to reduce air quality effects.
- 6.4.6 Due to increased traffic once the Proposed Development is fully operational, worst case concentrations of NO₂ are anticipated to exceed the objective threshold at one location, on Prospect Street at the junction with Henley Road and Peppard Road. There would be acceptable air quality all other locations for NO₂ and particulate pollution. The overall effect is considered not significant.
- 6.4.7 There are no significant effects anticipated as a result of the Proposed Development.
- 6.4.8 There are no cumulative effects anticipated as a result of the Proposed Development.

6.5 Noise and Vibration

- 6.5.1 The Site is currently exposed to noise from road traffic noise from Kidmore End Road, Grove Road, Brooklyn Drive, Highdown Hill Road and Eric Avenue; outdoor activity noise associated with Emmer Green Primary School; and intermittent aircraft noise from flights associated with Heathrow Airport.
- 6.5.2 Without mitigation such as acoustic screening, there would be a moderate adverse effect from noise from construction activities on the nearest homes located at the northern entrance to Eric Avenue, Goreselands, the north of Highdown Hill and immediately adjacent to the site entrance on Kidmore End Road. There would be a minor adverse effect from noise from construction activities on the rest of Eric Avenue, on Brooklyn Drive, opposite the site entrance on Kidmore End Road, and on Lyefield Court. The effect of noise on homes further away from the Site would be negligible. This is based on worst case noise levels; the nature of the construction works mean that the conservative situation predicted may only exist for a matter of days, or even hours. There would be regular periods, even during a single day, when the assumed plant would not be in operation, for example during breaks or changes of working routine.
- 6.5.3 Vibration from construction activities is likely to have a minor adverse effect on houses within 25 m of the Site including Eric Avenue, Goreselands, Highdown Hill Road, Brooklyn Drive, Kidmore End Road, and Lyefield Court.
- 6.5.4 The effect of noise from construction traffic would be negligible.
- 6.5.5 No assessment has been undertaken of noise from mechanical plant during the operation of the Proposed Development; during detailed design, the Applicant will demonstrate how any plant noise levels will be controlled in line with Reading Borough Council's Local Plan.

- 6.5.6 The effect of increased operational traffic on noise levels would be minor adverse for properties on Kidmore End Road and negligible at all other locations.
- 6.5.7 A Site Suitability Assessment was undertaken to understand the potential effect of current noise levels on the Site on new residents of the Proposed Development. The most exposed buildings to current noise levels on the Proposed Development would be those on the south east boundary near to Kidmore End Road. Noise levels inside these homes can be reduced to acceptable levels using glazing with minimum weighted sound reduction index of 25 dB Rw + Ctr; this may typically be achieved using glazing with a 4/6/4 configuration, and typical sound insulation for walls and ventilation. It would be acceptable to use partially open windows to reduce overheating in these buildings without any unacceptable noise levels expected. Outdoor amenity spaces would meet current World Health Organisation (WHO) guidelines.
- 6.5.8 Prior warning and sufficient information about the nature of works to be undertaken would reduce the effect of noise from construction activities to minor adverse and not significant in for the worst affected homes. A risk assessment should be undertaken before construction to determine the need for vibration monitoring. Best practice techniques to reduce vibration should be applied during construction.
- 6.5.9 With the above mitigation measures, there would be no significant effects as a result of the Proposed Development.
- 6.5.10 Due to the large distance between the Proposed Development and cumulative schemes, cumulative construction and operational impacts of an adverse nature are not expected.

6.6 Water Resources and Flood Risk

- 6.6.1 The Site lies entirely within Flood Zone 1. There is a low risk of groundwater and surface water flooding across the Site and a low risk of pluvial flooding across the majority of the Site, with a small area of medium-high risk in the south-eastern corner of the Site. There is an existing sewer running under the Site. The Site is located within a Source Protection Zone III meaning a low sensitivity for nearby abstraction and there is one abstraction well to the north of the Site.
- 6.6.2 Embedded mitigation measures include good water management measures to be included within the CEMP for the construction phase and measures to sustainably manage run-off as outlined in the Drainage Strategy submitted with this Application.
- 6.6.3 With the embedded measures in place there would be a negligible effect on water quality and the risk of groundwater and surface water contamination as a result of construction activities. There would also be a negligible effect during the operation of the Proposed Development on flood risk and on surface water and groundwater quality.
- 6.6.4 A detailed drainage strategy should be secured by planning condition. No additional mitigation measures are considered necessary.
- 6.6.5 There would be no significant residual effects on water quality or flood risk as a result of the Proposed Development.
- 6.6.6 There are no anticipated cumulative effects as a result of the Proposed Development.

6.7 Ecology

- 6.7.1 The Site consists of the southern half of an active golf course. Habitats contained within the Site include short-sward grassland (greens and fairways), taller grassland, mature tree belts, native hedgerow and small amounts of semi-natural broadleaved woodland habitat.
- 6.7.2 Anticipated effects prior to any mitigation during construction include minor adverse effects on the impact of degradation of priority habitats, disturbance of red kites for their nests and the impact of construction works on species such as the hedgehog. Furthermore, there is a negligible to minor adverse effect on the impact of invasive non-native species and construction works on badgers. All other anticipated effects during construction are considered negligible.
- 6.7.3 During operation, there is a moderate adverse effect anticipated on the Local Wildlife Site (LWS) of Reading Golf Course due to increased recreational pressure. Minor adverse effects are anticipated due to increased recreational pressure on priority habitats, light disturbance on bats, construction disturbance on hedgehogs and the impact on invasive and non-native species on the Site. A negligible to minor adverse effect is also anticipated on the disturbance of Red Kites.
- 6.7.4 The Proposed Development is seeking to achieve a 10% biodiversity net gain, which would represent a moderate beneficial effect.
- 6.7.5 Embedded mitigation measures during the construction phase comprise hedgerow retention for priority habitats, retention of trees that support bat roosting and foraging sensitive vegetation removal and monitoring of Red Kites nest, creation of new grassland habitat, covering construction trenches overnight, and the introduction of only native species of local origin into the Proposed Development.
- 6.7.6 During operation embedded mitigation measures include improvement of footpaths and restricted resident access into priority habitats, enhanced opportunities for nesting birds and native planting schemes.
- 6.7.7 Additional mitigation measures include covering trenches during construction to protect badgers, and surveys every 6 months if badgers setts come within 30 m of the construction site, a Habitat and Visitor Management Plan for the Reading Golf Course LWS during operation, a sensitive lighting scheme, a Landscape and Ecological Management Plan (LEMP) which include seed mixes and native tree/shrub planting for the Proposed Development.
- 6.7.8 After all mitigation, during construction there is a minor beneficial – negligible (not significant) effect on invertebrate habitat in the local area. All other residual effects are considered negligible and therefore not significant.
- 6.7.9 During operation, the only significant residual effect would be the moderate beneficial effect due to the attainment of 10% biodiversity net gain.
- 6.7.10 Other, non-significant residual effects include a minor beneficial effect on the Reading Golf Course LWS, negligible to minor beneficial effects on light disturbance on roosting and foraging bats, breeding bird habitats and disturbance to hedgehogs. All other effects are considered negligible and therefore not significant.

- 6.7.11 A cumulative effects assessment was undertaken assessing cumulative schemes in close proximity to the Proposed Development. The assessment determined that all cumulative effects associated with the Proposed Development are negligible and therefore not significant.

6.8 Archaeology and Built Heritage

- 6.8.1 This chapter of the ES assesses the likely significant effects of the Proposed Development in terms of archaeology and built heritage.
- 6.8.2 The Site does not contain any designated heritage assets, although a conservation area (Surley Row), a registered historic park and garden (Caversham Park) and 20 listed buildings lie within 1k m of the Site. However, none of these are visible due to existing residential areas, woodland, vegetation and distance. No previous archaeological investigations are recorded within the Site. The Site is characterised as a 20th century golf course.
- 6.8.3 Without mitigation, a major-moderate adverse significant effect is anticipated during the construction phase of the Proposed Development on the impact on buried archaeological deposits. All other effects prior to mitigation during construction and operation are considered negligible.
- 6.8.4 Due to the minimal effect of the Proposed Development on archaeology and built heritage, no embedded mitigation measures are necessary during the construction or operational phase of the Proposed Development.
- 6.8.5 During the construction phase, additional mitigation measures include recording buried archaeological deposits prior to loss. There are no additional measures for the operational phase.
- 6.8.6 With the recording of buried archaeological deposits in place, there would be a negligible residual effect due to the complete removal of buried archaeological deposits during the construction phase. There are no other residual effects associated with the Proposed Development.
- 6.8.7 Cumulative schemes in proximity to the Proposed Development have been assessed and no cumulative impacts have been identified.

6.9 Climate Change and Greenhouse Gas Emissions

- 6.9.1 Baseline greenhouse gas (GHG) emissions are mainly expected to arise from transportation to and from the Site by customers, staff and servicing, emissions from any operational buildings and emissions associated with management and disposal of vegetation. The Site includes many trees that absorb carbon dioxide during the daytime, and so the net emissions from the Site are likely to be negligible.
- 6.9.2 During construction, GHG emissions associated with construction materials (4,309 tonnes of carbon dioxide equivalent (TCO₂e)), construction traffic (3.4 TCO₂e), and construction plant are considered minor adverse in the context of local carbon budgets.
- 6.9.3 During operation, GHG emissions from regulated energy uses- such as heating, hot water and lighting - would be around 245 TCO₂e per year, considered to be minor adverse in the context of local carbon budgets. GHG emissions arising from transport would be around 339.4 TCO₂e over the life of the Proposed Development, which is also considered minor

adverse. GHG emissions would also arise from unregulated uses (such as cooking and personal electronics) but are likely to be negligible.

- 6.9.4 There are opportunities to reduce the GHG emissions embedded in construction materials such as sourcing only recycled metals, using cement with a higher fly ash content and using components that use fewer materials. However, this needs to be balanced against the need to adapt to climate change and enable circular economy approaches. Opportunities to reduce embedded carbon should be considered in the detailed design stage. Measures to reduce carbon emissions in transport will be included in the Construction Traffic Management Plan (CTMP).
- 6.9.5 Mitigation associated with regulated energy uses is embedded in the Proposed Development and presented in the **Energy and Sustainability Strategy** submitted with this application – measures achieve a saving of 185 TCO₂e per annum beyond a baseline of compliance with Part L of the Building Regulations. Measures to encourage public transport use and therefore reduce GHG emissions from operational transport will be outlined in a Travel Plan.
- 6.9.6 The total design life of the Proposed Development is considered to be 100 years. GHG emissions associated with the end of life of the Proposed Development cannot be estimated at this stage, but could be reduced with the application of circular economy principles.
- 6.9.7 The cumulative effect of GHG emissions arising from the construction of the Proposed Development and other neighbouring schemes is considered to be moderate-major adverse. However, the improvements in efficiency from building stock in Reading as a result of the Proposed Development and other cumulative schemes is considered to be of minor beneficial significance.
- 6.9.8 Whilst it is acknowledged that all emissions from the Proposed Development will contribute to the overall significant effect of climate change, it is considered that the project has and will adopt an appropriate and reasonable level of mitigation and the residual effects should therefore be considered not significant for the purposes of this EIA.
- 6.9.9 Climate change has the potential to change the nature of the effects of other topic chapters. Key climate risks related to the topics assessed in the ES are as follows:
- users of amenity space unable to use the space due to extreme weather or flooding;
 - additional demand on healthcare due to overheating and new diseases, or casualties from extreme weather or civil unrest;
 - reduced comfort for pedestrians, cyclists and public transport users due to extreme weather;
 - increased exposure to outdoor noise as windows are left open longer, potential need for cooling plant in the future, which may be a source of noise;
 - increased flood risk;
 - impact of changing weather and water availability on planting and landscape; and
 - potential changes to ground moisture and stability affecting any archaeological assets left in situ.

- 6.9.10 Measures for adapting to climate change could include energy monitors, separately programmable hot water and heating, drought resistant planting, water efficient installations, and the provision of solar shading in amenity areas. These measures could be included in a Climate Change Adaptation Plan at the detailed design stage. The effect of climate change on flood risk has already been considered in the **Flood Risk Assessment** submitted with this application.

6.10 Landscape and Visual Impact Assessment

- 6.10.1 There is an Area of Tree Preservation Order covering the Site, a Local Wildlife Site at the northern edge of the Site, and the Site is not currently publicly accessible.
- 6.10.2 Near to the Site, there is a small area of woodland designated in the emerging Local Plan as a Major Landscape Feature to the north, Clayfield Copse Local Nature Reserve (LNR) to the east, and areas of Ancient Woodland and Replanted Woodland in the wider golf course to the north. The Chilterns AONB is located 2 km to the north and west, the Historic Park and Garden of Caversham Park lies to the south-east; and Surley Row Conservation Area lies to the south. The Site does not form a role in the setting to these landscape related designations. There are a series of Listed Buildings scattered throughout the townscape of the study area and include Old Grove House (Grade II*) and The Barn (Grade II) at Highdown Hill Road which are the closest to the Site.
- 6.10.3 The topography of the study area broadly rises south to north with major ridgelines towards the north-west and north-east. There is a mosaic of mixed farmland and woodland, including ancient beech woodland and ash/oak woodland, generally to the north of the Site, and the settlements of Caversham and Reading to the south with predominantly 2-3 storey residential buildings in the immediate area.
- 6.10.4 The effect on landscape during construction would include:
- a contribution to the contextual landscape ranging from minor adverse (for construction activities) to moderate beneficial (associated with the tree planting which will take place in the early stages of construction);
 - an effect on the landscape character as designated at the county and local levels ranging from minor adverse (for construction activities) to moderate beneficial (associated with the tree planting which will take place in the early stages of construction);
 - a moderate adverse effect on the night-time character of the site due to construction lighting;
 - a minor adverse effect on the topography of the Site as earthworks alter the ground level;
 - an effect on local built height and form ranging from moderate-major beneficial (associated with the demolition of the clubhouse) to moderate-major adverse (associated with the construction of the buildings);
 - a major adverse effect on landscape character at the level of the Site;

- a minor adverse - negligible effect due to a reduction in access to public rights of way during construction and highway improvement work, although there are currently no public rights of way on the Site itself;
- a moderate adverse effect due to the change to site land cover from amenity grassland to a construction site; and
- a major-moderate adverse effect due to the temporary loss of some trees and shrubs on Site, although all lost trees will be replaced, leading to a minor beneficial effect over time.

6.10.5 During construction there would also be a major-minor adverse effect due to the reduction in quality of views from adjacent homes, a moderate-minor adverse effect on views from schools, community facilities and open space, and a minor adverse effect on views from local roads and local rights of way.

6.10.6 During operation, the effect on landscape would comprise:

- a minor beneficial contribution to the contextual landscape;
- a minor beneficial effect from the contribution of tree planting and from the use of appropriate building types to county level landscape character;
- ranging from a minor adverse effect on the local landscape due to the change of land use from a golf course to buildings, to a minor beneficial effect on the local landscape due to the additional tree planting to the north of the Site;
- a major adverse effect on the night-time character of the Site due to an increase in lighting intensity;
- ranging from moderate adverse to moderate beneficial effect due to change to Site landscape character, when considering both the introduction of buildings and the proposed landscaping on Site;
- a moderate beneficial effect resulting from the change to Site land cover from private amenity grassland to mixed housing and parkland;
- moderate beneficial effect arising from the increased public access and footpaths around the Site; and
- a moderate-major beneficial arising from an appropriate built height and form in the context of the Site surroundings.

6.10.7 Without mitigation, there would be an major-moderate adverse effect on local views for residential receptors, a moderate adverse effect on schools and community facilities, a moderate adverse effect on roads upon the opening of the Proposed Development, reducing to minor adverse once planting matures, and a minor adverse on open spaces (specifically Emmer Green Playing Field).

6.10.8 Embedded mitigation consists of the outline CEMP and illustrative masterplan. A detailed CEMP at the reserved matters stage would include details on hoarding, lighting and hours of work. This would not reduce the significance of any residual effects. Further details on material palette, landscape maintenance and lighting strategy should be provided at the

detailed design stage. This would reduce the significance of views from local homes and roads to minor beneficial and not significant.

- 6.10.9 The significant residual effects on landscape would therefore comprise temporary adverse effects due to construction on the Site night-time character (major adverse), Site landscape character (major adverse), the temporary loss of some trees from the Site (major-moderate adverse prior to replacement planting) changes in land cover (major-moderate adverse), the emergence of the new built form (major-moderate adverse), and on views from local homes (major-moderate adverse), open spaces, community and educational facilities (minor-moderate adverse). There would also be beneficial effects on the built form of the immediate area due to the demolition of the clubhouse (moderate-major beneficial).
- 6.10.10 There would be permanent adverse effects of the Proposed Development when complete and operational on the night time character due to the increase in lighting in the area (major adverse), and on views from adjacent residential receptors (moderate-major adverse). Before planting becomes established, there would be a moderate adverse effect on views from local roads, however this is considered temporary.
- 6.10.11 There would be permanent beneficial effects of the Proposed Development when complete and operational due to the new movement corridors and public rights of way around the Site (moderate beneficial), on Site land cover due to new planting and public open space (moderate beneficial) and due to the appropriate built height and form in this location (major-moderate beneficial).
- 6.10.12 The effect on the Site landscape character would range from moderate adverse (in the most densely built areas) to moderate beneficial (in areas of open space).
- 6.10.13 The only significant effect on landscape as a result of the cumulative schemes would be a moderate beneficial overall effect on land cover, building height and grain in the wider area, as the new developments when operational would make a better use of land with more attractive buildings than is currently the case. There would be no cumulative effect on visual receptors considered within the ES as the cumulative schemes are too far away with substantial development and topography intervening.

6.11 Cumulative Effects

- 6.11.1 Cumulative effects will be both intra-project and inter-project. Intra-project effects concern receptors surrounding the Proposed Development, residents and users of the Proposed Development, and, receptors within the Site itself. Inter-project effects are those arising from the combination of impacts from the Proposed Development with impacts from other projects alongside the Site, for instance cumulative impacts to air quality or socio-economics. Details of the three committed developments that were considered within the assessment of inter-project effects can be found in **Table 5.1** and **Figure 5.1** below.

Table 5.1: Schemes for Consideration in the Cumulative Effects Assessment

No	Development & Planning Application Reference	Summary of Development	Application Validated	Planning Status
1	SSE, Vastern Road. Ref: 190451	Land at Vastern Road, Reading, involving demolition of a number of structures on the site and the erection of a new residential scheme (up to 210 units), with a max height of 11 storeys (up to 36m above ground level) including a new north south pedestrian link, connecting Christchurch Bridge to Vastern Road towards the station as well as drainage infrastructure and landscaping.	09/05/2019	At Scoping Stage
2	Broad Street Mall, Broad Street, Reading, RG1 7QG. Ref: 182137	Construction of three residential buildings (Use Class C3) ranging in height from 5 to 22 storeys above Broad Street Mall (Site E to provide up to 50 units, Site B to provide up to 134 Units and Site A to provide up to 164 units) and provision of a podium level amenity area, Construction of a 16 storey building on South Court comprising ground and first floor retail(Use Class A1/A2/A3) and residential over upper floors (Use Class C3, Site C to provide up to 98 units), Creation of ground floor retail units (Use Class A1/A3/A4) fronting Dusseldorf Way and ground floor retail (Use Class A1/A2/A3).		Submitted

No	Development & Planning Application Reference	Summary of Development	Application Validated	Planning Status
3	71-73 Caversham Road, Reading, RG1 8JA. Ref: 191792	Demolition of former retail warehouse and erection of a new part 1, part 5, part 7 storey mixed-use building comprising 44 residential units, 239 sqm of retail floorspace (Use Class A1) at ground floor and associated car parking, cycle parking and landscaping.		Submitted
4	199-203 Henley Road and land to the Rear of 205-207 Henley Road, Caversham, Reading, RG4 6LJ. Ref: 190835	Demolition of 199-203 Henley Road and erection of part four, part three and part two storey 82 unit residential care home building (C2 use class) with associated external structures, access from Henley Road, car parking and landscaping.	19/12/2019	Granted

Intra-Project Effects

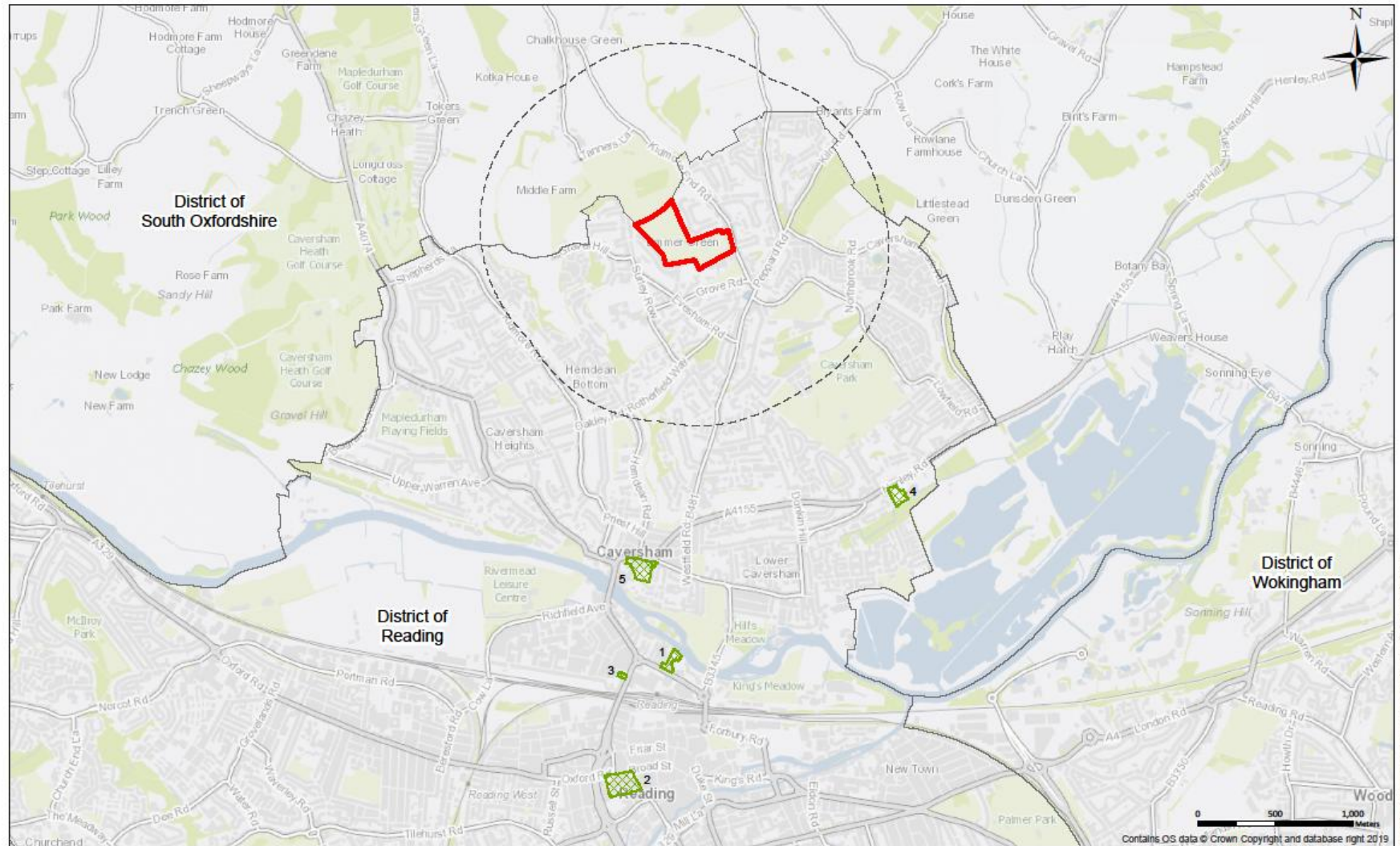
- 6.11.2 During the construction of the Proposed Development, there is a potential for disturbance and nuisance effects to local residents and early site residents due to visual impact and construction noise effects. This is likely to be limited to residents of Kidmore End Road and Eric Avenue, particularly those with properties fronting or abutting the Site. This is considered to be significant.
- 6.11.3 During operation, there may be increased demand for Emmer Green Primary School and Emmer Green Youth and Community Centre; users of both facilities would also experience a worsening of views northwards from these locations. The interactive effect is not considered significant.

Inter-Project Effects

- 6.11.4 The cumulative effect of the Proposed Development and other schemes during construction would be:
- a moderate – minor beneficial effect due to increased construction employment opportunities; and
 - a minor adverse effect on landscape features such as the contextual topographic setting, land cover setting, woodland and vegetation pattern, building height and urban grain, movement corridors, contextual skyline.

- 6.11.5 The significant cumulative effect of the Proposed Development and other schemes during construction would be:
- a moderate – minor beneficial effect due to increased construction employment opportunities.
- 6.11.6 The significant cumulative effect of the Proposed Development and other schemes during operation would be:
- a moderate – minor adverse effect on demand for primary school places due to the increased population;
 - a moderate beneficial effect on contextual land cover through better use of currently developed space, and more appropriate building height and urban grain compared to existing site uses;
 - a major – moderate beneficial effect due to the increase in housing supply, including affordable housing;
 - a moderate – minor beneficial effect on the local economy due to the employment and skills of residents;
 - a moderate-minor beneficial effect on employment and local economy due to an increase on labour supply; and
 - a moderate-minor beneficial effect on the local economy due to the spending of additional population.

Figure 5.1: Cumulative Schemes



7.0 Conclusions

7.1 Conclusion

- 7.1.1 The Site is approximately 12.15 ha in area and is centred at Ordnance Survey (OS) National Grid Reference (NGR) SU715767. The Site has been used as a golf course since the early 1900s and is bound to the north by the existing golf course; this boundary aligns with the county border between Berkshire and South Oxfordshire. The Site is identified as a site for development and change of use in the RBC Local Plan adopted in November 2019.
- 7.1.2 The outline application is intended to comprise 260 new homes in a mixture of 2, 3 and 4-bed houses and flats; 850 m² of non-residential floorspace intended for use as a medical centre (GP Practice); and associated landscaping, highways provisions and infrastructure provision across an overall area of development of approximately 12.15 ha.
- 7.1.3 It is expected that construction will begin in May 2021, with only one phase of construction which will last approximately 4 - 5 years. The completed development is expected to be fully operational by January 2026.
- 7.1.4 The environmental effects of the Proposed Development during both construction and operation have been assessed, and appropriate mitigation has been recommended.
- 7.1.5 The significant adverse residual effects anticipated during construction comprise:
- a moderate adverse effect on the night-time character of the Site;
 - a major- moderate adverse effect arising from the change to site land cover;
 - a major - moderate adverse effect due to the temporary reduction in trees on Site, before they are replaced;
 - a moderate-major adverse effect on building height and form due to construction works;
 - a major adverse effect on the Site landscape character;
 - a major-minor adverse effect due to the reduction in quality of views from adjacent homes; and
 - a moderate-minor adverse effect due to the reduction in quality of views from schools, community facilities and open space.
- 7.1.6 There would be significant beneficial effects associated with the demolition of the clubhouse (moderate major beneficial on built height and form).
- 7.1.7 The significant adverse residual effects anticipated during operation comprise:
- a major adverse effect on the night-time character of the Site due to increased lighting;
 - a moderate-major adverse effect on views from adjacent residential properties; and
 - a temporary moderate adverse effect on views from local roads.
- 7.1.8 The significant beneficial residual effects anticipated during operation comprise:

- a moderate beneficial effect from the achievement of 10% biodiversity net gain;
- a moderate beneficial change to Site land cover due to increased planting and public open space;
- a moderate beneficial effect due to increased public access and footpaths around the Site;
- a moderate-major beneficial effect due to the appropriate built height and form in the context of surroundings; and
- a moderate-minor and significant beneficial effect on the housing supply in the local area.

7.1.9 The effect on Site landscape character would range from moderate adverse in more densely developed areas to moderate beneficial where landscaped open space is provided.

7.1.10 During the construction of the Proposed Development, there is a potential for significant disturbance and nuisance effects to local residents and early site residents due to visual impact and construction noise effects. This is likely to be limited to residents of Kidmore End Road and Eric Avenue, particularly those with properties fronting or abutting the Site.

7.1.11 During operation, there may be increased demand for Emmer Green Primary School and Emmer Green Youth and Community Centre; users of both facilities would also experience a worsening of views northwards from these locations. The interactive effect is not considered significant.

7.1.12 The significant cumulative effect of the Proposed Development and other schemes during construction would be:

- a moderate – minor beneficial effect due to increased construction employment opportunities..

7.1.13 The significant cumulative effects of the Proposed Development and other schemes during operation would be:

- a moderate – minor adverse effect on demand for primary school places due to the increased population;
- a major – moderate beneficial effect due to the increase in housing supply, including affordable housing;
- a moderate – minor beneficial effect on the local economy due to the employment and skills of residents;
- a moderate-minor beneficial effect on employment and local economy due to an increase on labour supply;
- a moderate-minor beneficial effect on the local economy due to the spending of additional population; and
- a moderate beneficial effect through better use of currently developed space and due to more appropriate building height and urban grain compared to existing site uses.

7.1.14 **Table 6.1** outlines the effects which have been considered likely to occur during both construction and operation, once measures have been put in place to minimise any likely adverse environmental effects, and in some cases, enhance the benefits from the Proposed Development.

Table 6.1: Significant Residual Effects

Topic	Significant Residual Effect
Socio-Economics	
Construction	• Moderate – minor beneficial – Increased employment opportunities.
Operation	• Moderate – minor beneficial – Impact of additional provision for housing.
Traffic and Transport	
Construction	• None.
Operation	• None.
Air Quality	
Construction	• None.
Operation	• None.
Noise and Vibration	
Construction	• None.
Operation	• None.
Water Resources and Flood Risk	
Construction	• None.
Operation	• None.
Ecology	
Construction	• Moderate beneficial – 10% biodiversity net gain
Operation	• None.
Archaeology and Built Heritage	
Construction	• None.
Operation	• None.
Climate Change and Greenhouse Gases	
Construction	• None.
Operation	• None.
Landscape and Visual Impact Assessment	

Topic	Significant Residual Effect
Construction	• Moderate adverse – Effect on night-time character due to construction lighting • Major adverse – Effect on Site landscape character • Major- moderate adverse – Change to Site land cover • Major-moderate adverse – Temporary loss of trees from Site, prior to replacement • Major-moderate adverse – Effect on built form on the surrounding area due to the emerging construction • Major-moderate beneficial – Effect on built form due to the demolition of the clubhouse • Major-moderate adverse – Effect on views from adjacent homes • Moderate-minor adverse – Effect on views from Emmer Green Primary School, Emmer Green Youth and Community Centre, and local open spaces.
Operation	• Ranging from moderate adverse to moderate beneficial – changes to Site landscape character • Major adverse – change to night-time character due to increased lighting • Moderate beneficial – change to Site land cover due to increased planting and public open space • Moderate beneficial – increase in footpaths and public right of way around Site • Moderate – major beneficial – appropriate buildings for the local area • Moderate – major adverse – effect on views from adjacent homes • Moderate adverse – temporary effect on view from local roads until planting matures
Cumulative Effects	
Construction	• Moderate – minor beneficial – Increased construction employment opportunities.
Operation	• Major – moderate beneficial - Impact on population of increase in housing supply, including affordable housing. • Moderate – minor beneficial – Impact on employment and skills of residents; Impact on employment increase on labour supply; Spending of additional population within local economy. • Moderate – minor adverse – Impact of new population on demand for primary school places • Moderate beneficial - better use of currently developed space and more appropriate building height and urban grain compared to existing site uses