

CHAPTER 5:

THE PROPOSED DEVELOPMENT AND CONSTRUCTION OVERVIEW

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5.1 Introduction

- 5.1.1 This chapter describes the key elements of the Proposed Development, including those features which may lead to significant environmental effects and includes a summary of the key construction activities and associated construction programme.

5.2 The Proposed Development

- 5.2.1 The Application for the Proposed Development is in outline, with all matters reserved other than access. The description of development is as follows:

'Outline application with all matters reserved except access for the development of land at Reading Golf Club, involving demolition of the existing clubhouse and the erection of a new residential-led scheme, including proposed provision of Community Infrastructure'.

- 5.2.2 The illustrative layout of the Proposed Development is shown in **Figure 5.1**. Additional visualisations of the Proposed Development are provided throughout this chapter to aid the reader with the understanding of the design of the Proposed Development.

Land Use Mix and Areas

- 5.2.3 The Proposed Development is being applied for in outline, with all matters reserved other than access therefore for the purposes of the assessments an illustrative scheme has been developed based upon a 260 home residential development with 850 m² allocated for community use intended as a health centre (subject to agreement with the NHS Primary Care Trust).
- 5.2.4 **Table 5.1** below presents the breakdown of areas by land use type within the Proposed Development and **Table 5.2** shows the illustrative dwelling mix for the Proposed Development.

Table 5.1: 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-residential institutions)	850 (GEA)

Table 5.2: 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

- 5.2.5 The dwelling and tenure mix for the Proposed Development is sympathetic to Reading Local Plan (2019) and the requirements of Policy H3, therefore in line with policy 30% of the

proposed residential homes provided will be affordable housing. Of this, 70% will be socially or affordably rented with the remainder intermediate or shared ownership housing.

Building Design

- 5.2.6 The 260 units that comprise the residential aspect of the Proposed Development include a range of dwelling types. As indicated in **Table 5.2**, these range from 1 bed apartments 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 to be sympathetic to the surrounding area.
- 5.2.7 The total Site area is 12.15 hectares, resulting in a housing density of approximately 21.4 dwellings per hectare.

Access and Parking

- 5.2.8 In total, 2 access points are proposed, both are at the south eastern corner of the Site along Kidmore End Road. As there is no access to the Site from the west from Eric Avenue or Highdown Hill road, from the south as the Site is bounded by Emmer Green Primary School, or north. These access points are as follows:
- Off Kidmore End Road by way of a priority 'T' junction in a similar location to the existing site access; and
 - Off Kidmore End Road, utilising the existing emergency access (located north of the main site access).
- 5.2.9 The primary site access will be from Kidmore End Road to the south east corner of the Site, at the 'T' junction with Chalgrove Way.
- 5.2.10 Proposals include pedestrian and cycle routes across the Site. The proposed 'Main Street' would include a 3 m wide cycleway.
- 5.2.11 In line with RBC cycle parking standards, 436 cycle parking spaces will be provided for the Proposed Development.
- 5.2.12 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. Additionally, 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. There would be a further 14 parking spaces for visitors.
- 5.2.13 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 medical 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

Figure 5.1: The Proposed Development Layout



Open Space and Landscaping Strategy

- 5.2.14 Open space on Site will be provided as publicly accessible open spaces. Planned areas of open space will be provided as part of the reserved matters application along with designated areas of children's play. There will be a provision of at least 3.37 ha of public open space and amenity space as part of the Proposed Development.
- 5.2.15 Further information on the Proposed Development's open spaces and landscaping strategy can be found in **ES Volume 3, Landscape and Visual Impact Assessment** and in the **Design and Access Statement**, which is being submitted separately to this ES.

Energy and Sustainability Strategy

- 5.2.16 An Energy and Sustainability Statement for the Proposed Development has been produced and is being submitted separately to this ES. The aim of the strategy is to reduce regulated CO₂ emissions in a cost effective, viable and technically appropriate manner.
- 5.2.17 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.
- 5.2.18 Energy targets will be met via a mixture of passive measures, energy efficient fixed services and Low or Zero Carbon (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.
- 5.2.19 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.
- 5.2.20 Detailed calculations regarding energy demand and carbon dioxide emissions will be undertaken at the detailed design stage, alongside opportunities to reduce the resource intensity and maximise the end of life potential of the architectural proposals.
- 5.2.21 More information regarding Climate Change and Greenhouse Gas Emissions is available from **ES Volume 2, Chapter 13: Climate Change and Greenhouse Gas Emissions**.

Lighting Assessment and Strategy

- 5.2.22 The Site is largely dark and the Proposed Development will introduce new sources of artificial lighting to this area. A lighting assessment was undertaken that found the receptors most likely to be negatively impacted by introduced sources of obtrusive light were residents located in close proximity to the site boundary on Brooklyn Drive, Kidmore End Road, Lyefield Court, Gorselands and Eric Avenue, as well as road users on Kidmore End Road, as well as bats. The effect on these receptors is included in more depth in **Volume 2, Chapter 11: Ecology and Volume 3: Landscape and Visual Impact Assessment**.
- 5.2.23 Standard controls on construction lighting will be utilised and outlined in the CEMP.

- 5.2.24 A number of design principles should be considered during the detailed lighting design, which should be secured by condition: lighting should be directed away from sensitive receptors; full cut off lighting systems should be installed so that lighting can be directed downwards rather than horizontally; reflectance from building and plant should be avoided; external lighting should be reduced outside working hours; and automated devices should be used wherever possible.
- 5.2.25 Impacts on bats and other ecological receptors can further be avoided by: reducing lighting levels in sensitive locations; using light wavelengths that have a lesser effect on bats; use of a Central Monitoring System to turn off lights during bat emergence and foraging times; and further details should be included in an Ecological Management Plan secured by condition.
- 5.2.26 The preliminary lighting design will be submitted for the approval of RBC at the detailed design stage will be informed by an illuminance contour plan of external lighting for the Proposed Development to demonstrate that obtrusive light limitations for sensitive receptors can be achieved.
- 5.2.27 The preliminary lighting designs will aim to provide suitable lighting for the proposed land uses to allow them to function safely and effectively, in accordance with the relevant guidance and standards and recommendations presented within the lighting assessment.

Drainage Strategy

- 5.2.28 Drainage on Site will be managed via a sustainable urban drainage systems (SuDS) hierarchy as demonstrated in the **Outline Sustainable Drainage Systems Strategy (ES Volume 4, Appendix D2)**.
- 5.2.29 The White Chalk underlying the Site is considered an appropriate medium to receive infiltrating stormwater. Run-off from the Proposed Development will be discharged via gravity to four infiltration basins located in the northern part of the Site. The basins are capable of attenuating and infiltrating all Site runoff up to and including the 1 in 100 year event +40% allowance for climate change. Appropriate management and maintenance arrangements for the proposed SuDS scheme will be in place throughout the lifetime of the Proposed Development.

Waste

- 5.2.30 An Operational Waste Management Strategy would be developed at the Reserved Matters Stage of this application.

5.3 Construction Overview

- 5.3.1 The Proposed Development is being applied for in outline with all matters reserved other than access, though for the purposes of the EIA an indicative construction overview has been prepared so as to understand the likely effects associated with construction. The information presented in this section is for assessment purposes, is indicative and subject to change once the relevant contractor has been appointed. However, this information has been collated from significant experience of developing schemes of this type and scale, and a conservative approach has been taken.

Indicative Construction Programme

- 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, a scheme of this scale will take approximately 5 years to complete with an estimated start date of May 2021. With the Proposed Development expected to be completed by January 2026.
- 5.3.3 The construction of the Proposed Development is not anticipated to be undertaken in distinct phases. It is assumed that one development phase working progressively from eastern boundary of the Site nearest Kidmore End Road, working westwards and then northwards over the proposed five-year construction timeframe.

Figure 5.2 Indicative Construction Programme

Component	Program 6-Monthly Breakdown (January 2020 to January 2026)												
	Jan 2020	June 2020	Jan 2021	June 2021	Jan 2022	June 2022	Jan 2023	June 2023	Jan 2024	June 2024	Jan 2025	June 2025	Jan 2026
Site Preparation and Enabling Works													
Main works													
Fit-Out and External Works													

- 5.3.4 An indicative plan has been produced in **Figure 5.3** which shows the construction of the Proposed Development progressing in numbered sections from the eastern boundary through to the north western boundary. A construction compound will be located in the central area of the Site, which will move to the north western corner upon completion of the construction of the main road through the Site.

Figure 5.3: Indicative Route to Build Plan



5.4 Structures to be Retained

- 5.4.1 There is currently an existing golf clubhouse on Site which will be demolished to allow the construction of the eastern section of the Site. No existing buildings or structures are to be retained on Site.

Trees

- 5.4.2 The proposed tree strategy would include the like-for-like replacement of all trees unavoidably removed due to the development, and the relocation of 4 memorial trees. As an additional benefit a commitment to a further 1,000 trees will be made by the Applicant to be planted to the north of the red-line boundary within Reading Golf Course adjacent to the existing Cucumber Wood ancient woodland. Further details on the proposed tree strategy is available from the **Arboriculture Report**, which is being submitted separately to this ES.

Description of Works

- 5.4.3 Investigations and surveys will be undertaken in line with regulatory requirements before construction takes place. The following sections provide an overview of the construction strategy for the Proposed Development.

Site Preparation and Enabling Works

- 5.4.4 The set-up on the Site is anticipated to start (subject to the relevant approvals) in the spring of 2021.
- 5.4.5 The Site works will start with an enabling works phase which will commence with establishing safe access to the Site from Kidmore End Road.
- 5.4.6 The following main activities will occur during the first phase of works:
- initial site set-up;
 - installation of temporary haul road;
 - site clearance;
 - topsoil stripped and land re-profiled; and
 - site will be secured using perimeter fencing with access / egress procedures put in place.

Main Works

- 5.4.7 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.
- 5.4.8 The following activities are likely to occur during the main works:
- any required survey works;
 - any vegetation clearance;
 - bulk excavation;

- erection of frame and external envelope finishes including brickwork, cladding and windows; and
- installation of roofing system.

Fit-Out and External Works

- 5.4.9 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.
- 5.4.10 The following works are likely to occur during fit-out:
- fix of mechanical and electrical installation;
 - internal fit-out of new buildings;
 - completion of car-parking facilities;
 - hard / soft landscaping; and
 - site compound reduced and removed once works complete.

Site Working Hours

- 5.4.11 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

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

Plant and Equipment

- 5.4.13 During the site preparation, enabling works and the construction of the Proposed Development a range of plant and equipment will be utilised. Piling works are not anticipated. **Table 5.3** outlines plant and equipment to be used during the construction phase.

Table 5.3: Construction Plant and Equipment used during the Construction Phase

Plant and Equipment	Stage of Works				
	Enabling, Demolition	Substructure	Superstructure	Envelope	Fit-out
Excavator	✓	✓			
Articulated Dump Truck	✓				
Drills / Cutters	✓	✓	✓		✓
Compacter / Roller		✓			
Concrete Pump		✓	✓		
Generators			✓		
Floodlights	✓	✓	✓	✓	✓

Plant and Equipment	Stage of Works				
	Enabling, Demolition	Substructure	Superstructure	Envelope	Fit-out
Scaffolding		✓	✓	✓	✓
Asphalt Plant				✓	✓
Fork Lift Truck			✓	✓	✓

Construction Traffic

- 5.4.14 **Table 5.4** 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 5.4 Construction Traffic – Expected Vehicle Numbers

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

- 5.4.15 It is assumed that construction traffic will travel down Peppard Road from each direction from the south via the A33 and M4 and from the north via Kiln Road, A4155 – A404. Construction traffic travelling from the south along Peppard Road would result in traffic moving through Caversham Town Centre. The majority of the journeys during construction will be via the classified and strategic highway network.
- 5.4.16 In order to avoid Caversham Town Centre, construction traffic could travel over Reading Bridge on the B3345, onto the A4155 Henley Road, and travel toward the Site from the east using Caversham Park Road, then travelling from the north on Peppard Road onto Kidmore End Road to access the Site.
- 5.4.17 Further information on construction related traffic impacts and mitigation can be found in **ES Volume 2, Chapter 7: Traffic and Transport**.

Construction Traffic Access and Management

- 5.4.18 All entrances to Site will be managed by trained traffic marshals to segregate and organise all vehicle movements on and off the Site. This will involve the segregation of pedestrians using physical barriers to ensure vehicle movements are separated from members of the public. Full details of construction vehicle access to the Site will be confirmed within a Construction Logistics Plan, which will be the subject of a Planning Condition as part of any planning approval.
- 5.4.19 The access to the Site is currently limited, with only one existing entrance point from Kidmore End Road in the east. It is likely that there will be a dedicated construction access in the southeast of the Site off Kidmore Road (as outlined in **Figure 5.3**) It is assumed this will be form the primary access route for construction vehicles. A temporary compound towards the centre of the Site will be created until the road is complete. The compound will then be moved permanently for the remainder of construction to the north western corner of the Site. The

construction of the main road running through the Site will require the demolition of the existing golf clubhouse. Once this access is created, it is assumed construction traffic may also use this route.

- 5.4.20 Further information on construction related traffic impacts and mitigation can be found in **ES Volume 2, Chapter 7: Traffic and Transport**.

Materials and Resource Use

Construction

- 5.4.21 An estimation of the main bulk materials and their approximate volume to be used during construction of the Proposed Development has been provided in **Table 5.5**.

Table 5.5 Approximate Quantum of Construction Materials used for the Proposed Development

Construction Materials	Volume	Units
Foundation Concrete	10,000	M ³
Bricks	31,527	M ²
Concrete Blocks	39,409	M ²
Roof Tiles	20,427	M ²

- 5.4.22 **Table 5.6** identifies the approximate volume of waste materials that will be generated during construction of the Proposed Development.

Table 5.6 Approximate Quantum of Construction Waste Materials generated by the Proposed Development

Construction Materials	Volume	Units
Foundation Concrete	1,500	M ³
Bricks	4,729	M ²
Concrete Blocks	5,911	M ²
Roof Tiles	3,064	M ²

Construction Environmental Management Plan

- 5.4.23 An outline CEMP has been submitted with this application and includes:
- access and parking arrangements;
 - policies for storage of oils and fuels, and plant use maintenance;
 - arrangements and location for wheel washing, and some dust control measures;
 - measures for the protection of the natural environment to include watercourse, tree and hedge protection;
 - hours of work; and
 - piling sustainability policy.
- 5.4.24 It is recommended that this is updated with further detail at the detailed design stage.

Waste Strategy, Materials and Resource Use

- 5.4.25 A Site Waste Management Plan 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. All relevant contractors will be required to investigate opportunities to:
- eliminate waste at the source;
 - reduce waste;
 - maximise re-use of packaging; and
 - recycle where unable to eliminate, reduce or reuse, particularly demolition and construction materials.
- 5.4.26 Waste will only be deposited at authorised waste recycling, treatment and disposal sites. To prove the correct handling of excavated material and to prevent the occurrence of fly-tipping, a docket system or waste monitoring system off-site will be used. The contractor will operate a sequentially numbered docket system to confirm that each load is received at the appropriate disposal site. Copies of the dockets are to be provided to the nominated manager and made available for inspection.
- 5.4.27 Key considerations within the waste strategy include: Refuse and recycling; segregation; monitoring of waste production; storage and housekeeping and design considerations.

Public Relations

Local Residents and Businesses

- 5.4.28 The Applicant will aim to establish contact with the various local landowners, residents and businesses. This will be done through periodic newsletters detailing project progress, specific works that may be relevant and contact details for the Site. It is proposed to hold periodic meetings to explain anticipated works for the forthcoming quarter and how these will impact upon Site neighbours.
- 5.4.29 The Site will be screened by 2.4 m high hoarding (higher in certain circumstances for marketing and security reasons) around the external boundary. The hoarding will be maintained to a high standard throughout the construction of the Proposed Development. As works progress above the hoarding, measures will be introduced to control work at heights by task specific method statements and collective proprietary barriers to protect adjacent properties from the risks of falling materials.
- 5.4.30 The Applicant will liaise extensively with nearby residents to ensure any concerns are understood and mitigated. Communication will be through newsletters and local project information boards situated on hoardings with contact information for raising comments or complaints. If required or requested regular meetings will be held with local residents and businesses to discuss concerns