ENVIRONMENTAL STATEMENT
VOLUME 1
CHAPTER 4 - THE PROPOSED DEVELOPMENT

4 PROPOSED DEVELOPMENT

4.1 INTRODUCTION

4.1.1 This Chapter provides a description of the Proposed Development, in accordance with Paragraph 1, Schedule 4 of the EIA Regulations (**Ref. 4.1**) including a description of how the Proposed Development would be constructed, and the assumptions used for the basis of assessment. This description aligns with the proposal for which planning permission is sought, and, together with the supporting plans (as identified in Section 4.6 below), is the basis of the technical assessments of this Environmental Statement (ES) (**Chapters 5 – 13**).

4.1.2 It should be noted that a summary of an earlier iteration of the Proposed Development was submitted as part of the Scoping Report. Since then, plans for the Proposed Development have been further refined, however it is considered that the Proposed Development, as described in this Chapter, remains materially the same as the scheme described in the EIA Scoping Report.

4.2 OVERVIEW OF THE PROPOSED DEVELOPMENT

4.2.1 Planning permission is sought for the following:

"*Redevelopment of part of golf course to provide new leisure resort (sui generis) incorporating waterpark, family entertainment centre, hotel, conferencing facilities and restaurants with associated access, parking and landscaping.*"

AIMS OF THE PROPOSED DEVELOPMENT

4.2.2 This section briefly discusses the aims of the Proposed Development. Further information on the aims of the Proposed Development and design strategy and evolution can be viewed in the Design and Access Statement that has been submitted in support of the planning application.

4.2.3 Four design principles underpin the Proposed Development design, these are:

- Layering: The Proposed Development is composed of three complementary layers: an outer ring of natural woodland conceals and protects the inner landscape which surrounds the lodge at its centre;
- Perceived Scale and Massing: The Proposed Development mitigates its perceived scale and massing through design and materiality to stand comfortably in its expansive landscape context;
- Circulation around Central Hub: The Proposed Development revolves around a central hub connecting the three components. From the arrival space the guest moves through the lobby and onto the guestroom wings or through the Family Entertainment Centre (FEC) and into the waterpark; and
- Three Components and Hierarchy: The Proposed Development has a hierarchy between three components where the FEC is less prominent than the hotel and water park. The residences also have a hierarchy which is reflected in their material construction, with the Porte Cochere arrival space being the central area, branching out to the residence wings in the north and south.

PLANNING CONTEXT

4.2.4 In relation to the Town and Country Planning (Use Classes) Order 1987 (as amended) (**Ref. 4.2**), it has been agreed with Cherwell District Council that the Proposed Development falls outside of any specific use class and is therefore considered to be 'Sui Generis'. The component parts, for the

purposes of specific technical assessments, can be considered to most closely relate to Use Classes A1 (retail), A3 (restaurant), C1 (hotel), D1 (leisure) and D2 (conference).

4.2.5 The Cherwell Local Plan (2011-2031) (**Ref 4.3**) explicitly supports proposals for new or improved tourist facilities within the Cherwell District that "*demonstrate direct benefit for the local 'visitor' economy*" and increase overnight stays and visitor numbers within the District. It is felt that the Proposed Development supports these aspirations.

4.2.6 A Planning Statement has been prepared and submitted in support of this planning application that frames the Proposed Development in the context of planning policy and guidance at all levels and provides details on the planning history of the Site. Where relevant, planning context will also be provided in technical chapters of this ES (**Chapters 5 - 13**).

4.3 PLANS AND DESIGN ASSUMPTIONS

4.3.1 The Proposed Development is set out in a series of plans. The plans to be used for the purpose of the EIA, and which are submitted in support of the planning application, are summarised below (included at the end of this Chapter):

- **Figure 4-1 - Site Plan**
- **Figure 4-2 - General Arrangement Ground Floor**
- **Figure 4-3 - General Arrangement First Floor**
- **Figure 4-4 - General Arrangement Second Floor**
- **Figure 4-5 - General Arrangement Third Floor**
- **Figure 4-6 - General Arrangement Roof Plan**
- **Figure 4-7 - North East and South East Elevations**
- **Figure 4-8 - South West and North West Elevations**
- **Figure 4-9 – Overall Landscape General Arrangement**

4.3.2 These plans are supported by a series of design principles which provide supplementary details. These design principles are outlined below alongside any necessary assumptions for the purposes of the EIA.

SITE BOUNDARY

4.3.3 All temporary and permanent activities relating to the construction and operational activities of the Proposed Development would be contained within the site boundary as illustrated in **Figure 1-2: Red Line Boundary**. The EIA is based upon this Site boundary.

PROPOSED DEVELOPMENT LAYOUT / LAND USE

4.3.4 The Proposed Development comprises a hotel, waterpark, restaurants, conferencing facilities, family entertainment centre and associated parking and landscaping. The Proposed Development comprises a variety of uses and has a total Gross External Area (GEA) of 52,685m^2. **Figure 4-1 - Site Plan** provides a visual illustration of the layout of the Proposed Development. **Table 4-1 4-1** provides a breakdown of the Gross Internal Area (GIA) for each component of the Proposed Development.

Table 4-1 – Floorspace per Proposed Development Component

Component	Quantum of Floor Space GIA (m^2)

Hotel	27,250
Waterpark	8,340
Family Entertainment Centre (FEC), conference facilities and Back of House (BOH)	12,350
Total GIA	47,940

4.3.5 The maximum heights (expressed in metres Above Ordnance Datum (mAOD)) for the Proposed Development that have that have been utilised within this ES are provided in **Table 4-2**.

Table 4-2 – Maximum Heights of the Proposed Development

Component	Height (mAOD)
Hotel	22
Family Entertainment Centre	14
Waterpark	18.8
Slide Tower	22.5

Hotel

4.3.6 The hotel is made up of a ground floor plus part three and part four storeys and will comprise 498 rooms, 10% of which are accessible for the disabled. The breakdown of the rooms within the hotel is shown within **Table 4-3**.

Table 4-3 – Room Mix

Room Type	Quantity
Family Suite (6 bed)	239
Grizzly Suite (8 bed)	53
Kids Cabin (7 bed)	96
Wolf Den (6 bed)	110
Total	**498**

Family Entertainment Centre (FEC)

4.3.7 The FEC is a one storey section of the Proposed Development, with two clear internal heights (one is 5m and the taller one is 10.2m high). The FEC connects the guestrooms to the waterpark and conference centre. The positioning of this element and its relatively low height is designed to minimise the visual impact of the Proposed Development.

4.3.8 The FEC will provide an adventure park, food and beverage and merchandise / retail. The adventure park will provide activities including ropes course, climbing wall, miniature golf, family bowling, arcade games and an interactive 'MagiQuest quest' (role playing) game.

Waterpark and Conference Centre

4.3.9 The waterpark will provide a variety of pools and slides, with the slides to be housed within the Slide Tower and protrude from the building. Landscaping and positioning of the slides and Slide Tower have been designed to minimise impact to sensitive viewpoints.

BUILDING MATERIALS/FAÇADE(S)

Hotel

4.3.10 The principle façade design for the entrance to Proposed Development is a Manor House style with central and symmetrical stone gable walls which rise above roof level. The hotel has three elevational concepts based around the manor house estate typology: the Manor House Entrance, Residences and the Stable Bedrooms, as show in **Figure 4-10.**

Figure 4-10 - Illustrative Proposed Hotel Buildings

4.3.11 The hotel buildings will be made up of façades which comprise limestone, render and timber cladding and roof materials will comprise red clay tiles and grey slate tiles as shown in **Figure 4-11**.

4.3.12 There will also be a timber built Port Cochere at the entrance to the hotel.

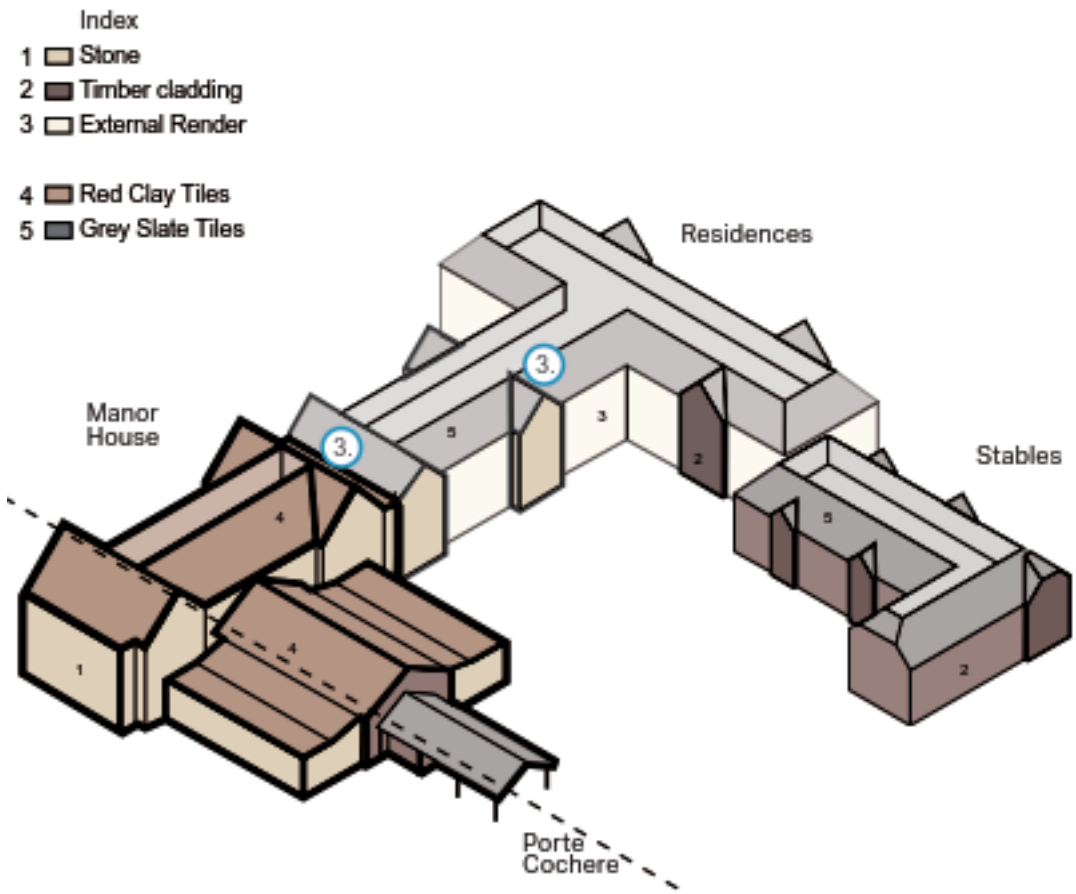


Figure 4-11 - Proposed Materials for Hotel Building Façades

Family Entertainment Centre, Waterpark and Conference Centre

4.3.13 The façades of the Conference Centre will be timber-clad with arch bracing details with a pitched roof lean-to which reduces the sense of height. As shown in **Figure 4-12**.

Figure 4-12 - Illustrative Proposed Conference Centre

4.3.14 The façades of the waterpark will be green metal cladding panels with concrete panel base. The dark green colour has been chosen to be contextual to agricultural buildings within the local Oxfordshire area. As shown in **Figure 4-13.**

Figure 4-13 - Illustrative Proposed Waterpark Building

CLIMATE CHANGE RESILIENCE

4.3.15 The Proposed Development incorporates several embedded design measures to take the likely impacts of climate change into account. These measures are summarised in this chapter, namely in relation to the energy strategy and drainage strategy for the Proposed Development (see below for further details). For further detail please refer to the Sustainability Statement submitted in support of the planning application.

4.3.16 In addition, 10% of all parking spaces at the Proposed Development will have Electric Vehicle (EV) charging facilities to promote low-carbon travel (with the entire car park being future proofed to enable this percentage to increase as needed to match demand).

OPERATIONAL ACCESS AND MOVEMENT

Pedestrian and Cycle Access

4.3.17 The Proposed Development will provide a new 2.5m wide shared foot/cycleway from the Site entrance to Chesterton (east of the Site entrance) and from the Site entrance to the end of the existing public footpath (west of the Site entrance), along with dropped kerbs and pedestrian refuge at the Site entrance as shown on **Figure 4-14**.

4.3.18 The Public Right of Way (PRoW) (Footpath 161/6/10) that crosses the Site in a north to south-east direction, will be diverted around the south-eastern boundary of the Site, as shown on **Figure 4-14**.

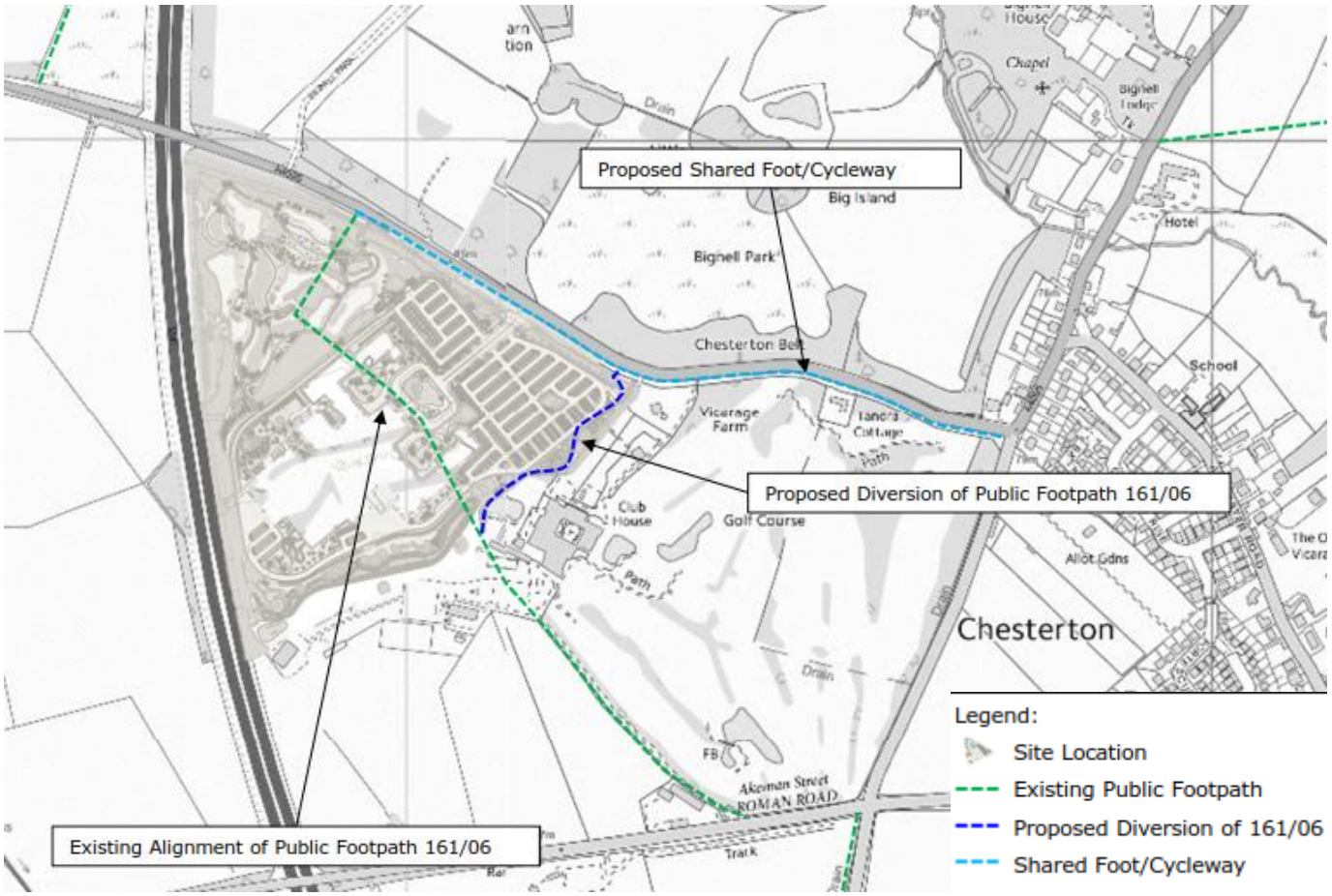


Figure 4-14 - Proposed Shared Foot/Cycleway and PRoW Diversion

Vehicular Access

4.3.19 The Proposed Development will include a new vehicular access T-Junction which will connect to the A4095, which runs along the northern boundary of the Site, as shown on **Figure 4-15**. This will be used for both construction traffic and for vehicles when the Proposed Development is operational.

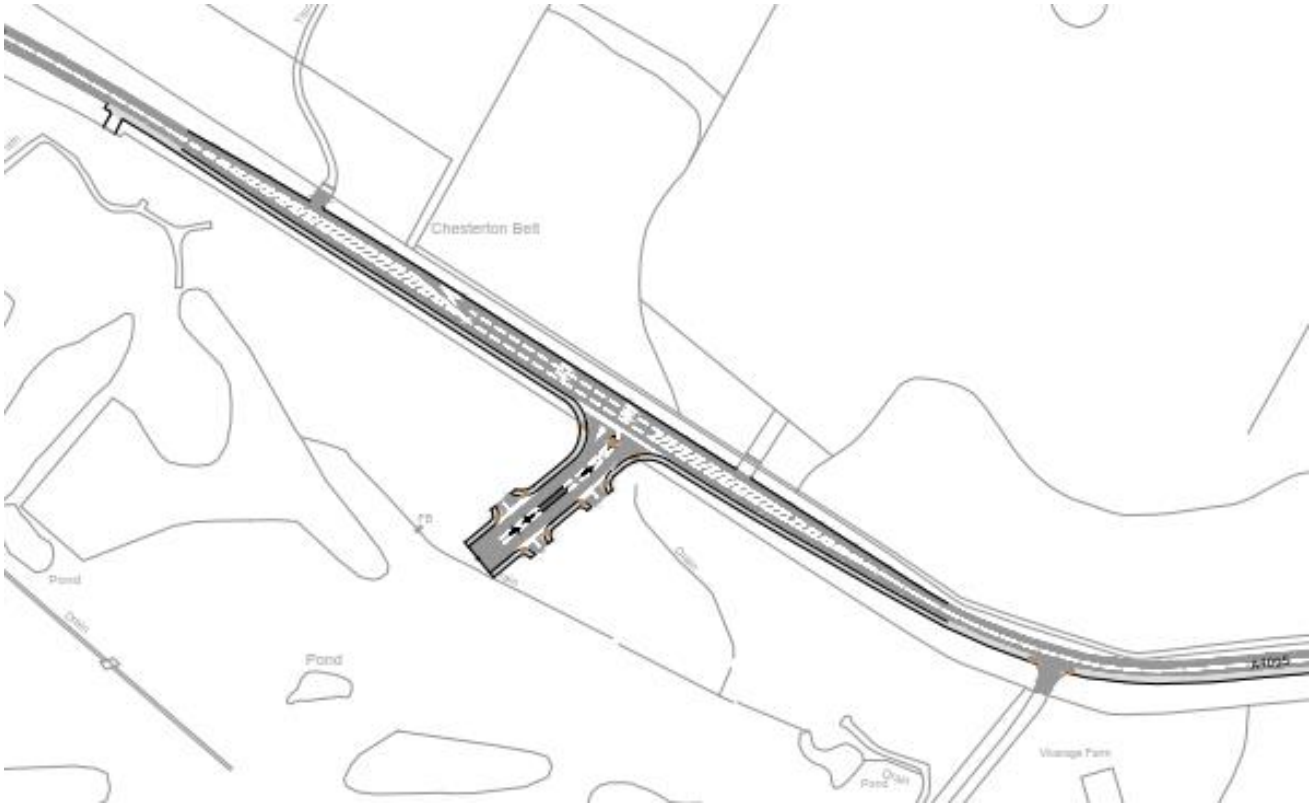


Figure 4-15 - New Vehicular Access Junction on A4095

4.3.20 Access routes to the Proposed Development will utilise both M40 Junction 9 and 10 to connect to wider regions, shown in **Figure 4.16**. In addition, a shuttle bus service will be implemented to transport visitors and staff from Bicester North, Bicester Village rail stations and Bicester town centre to the Proposed Development, which aims to reduce reliance on private cars.

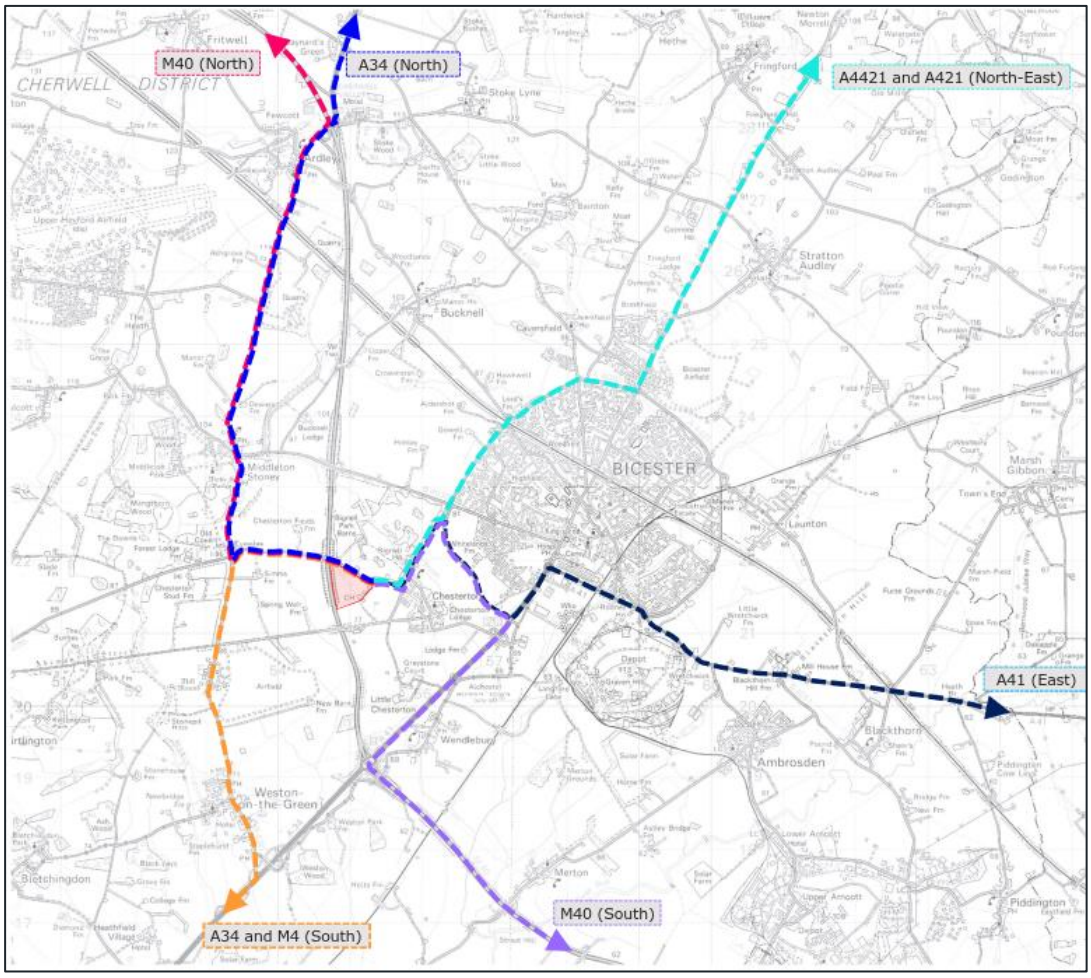


Figure 4-16 - Car Access Routes

Vehicle and Cycle Parking

4.3.21 There will be a total of 902 parking spaces provided as part of the Proposed Development which include 56 disabled accessible parking bays and 90 electrical charging points. A total of 80 cycle parking spaces are included within the Proposed Development, 40 of which are short-stay spaces reserved for guests and the remaining 40 long-stay spaces reserved for staff.

4.3.22 Coach parties are not expected at the Proposed Development, however to ensure all eventualities are catered for, a swept path analysis has been undertaken to demonstrate that a coach could access the Site if required, and drop off under the Port Cochere. The guest mini-bus service would also drop off under the Port Cochere, and the staff mini-bus service would drop off using the mini-bus bay on the service access road.

Service Road

4.3.23 Service vehicles will use the route around the perimeter of the car park, as shown in **Figure 4-17**. A dedicated service area and loading dock will be provided, as shown in **Figure 4-18** (showing access by a refuse vehicle), to enable service vehicles to return along the service road, thereby avoiding a crossover with the guest parking.

4.3.24 Emergency vehicles will have access around the entire perimeter of the buildings. The northerly section of the access road will be a track road, designed to integrate within the landscape strategy.

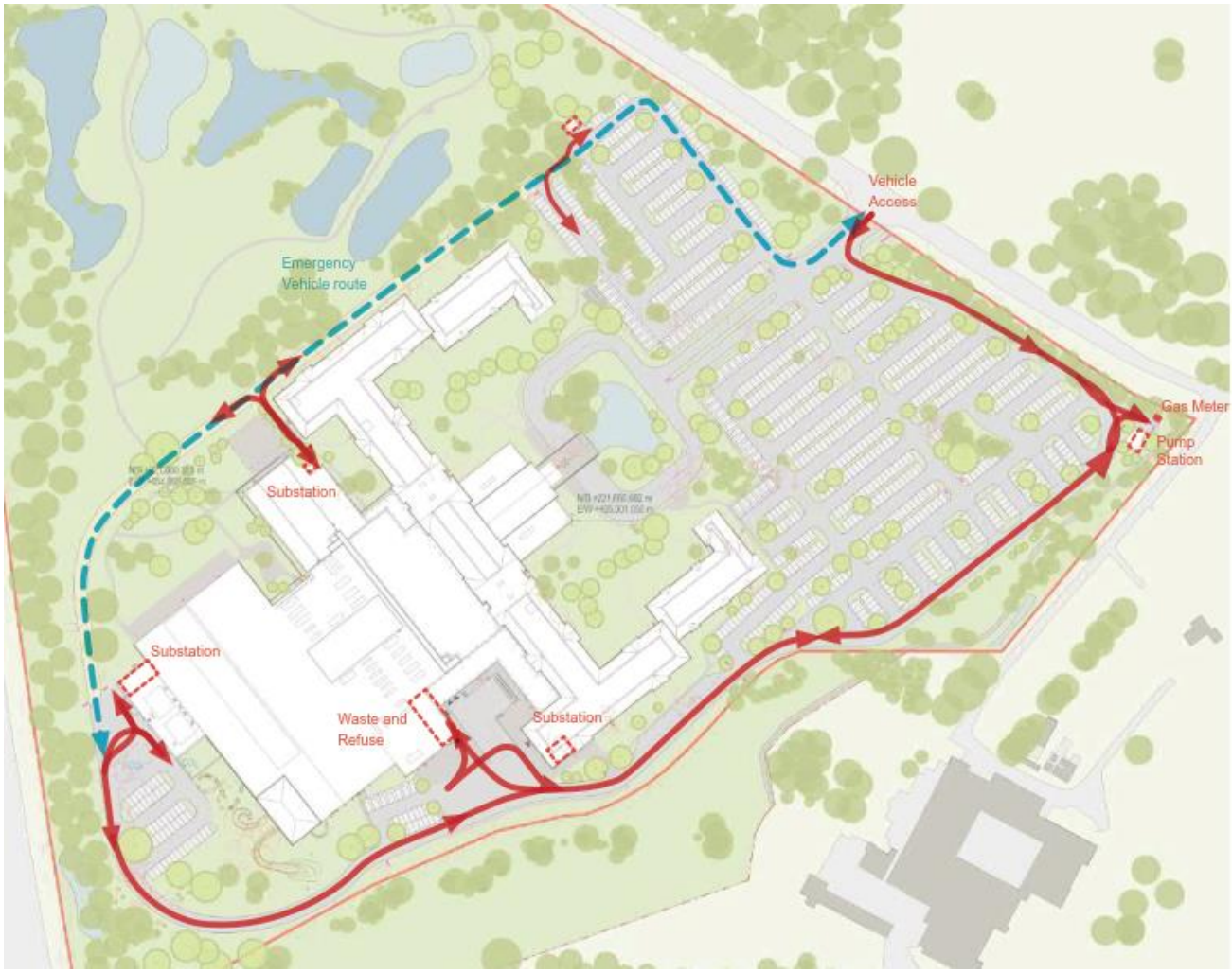


Figure 4-17 - Proposed Service Route and Emergency Vehicle Route

Figure 4-18 - Proposed Service Delivery Area

PROPOSED SITE LEVELS

4.3.25 As a precise cut and fill exercise has not been undertaken, an assumption has been made that 2 m of earth would be removed across the Site, to reduce Site levels to below the 650mm deep piling mat level. This would result in 50,816 m^3 of material to be exported off site.

PROPOSED DRAINAGE

4.3.26 A Flood Risk Assessment and Below Ground Drainage Strategy have been prepared for the Proposed Development and can be viewed in **Volume II: Appendix 12.1** and **12.2** respectively, however a summary is provided below.

4.3.27 The proposed Below Ground Drainage Strategy is to include Sustainable Drainage Systems comprising reinstating and upgrading the existing land drainage system and the use of green roofs, permeable pavements (1.84ha) and swales as part of the on-site collection system. There are two existing drainage ditches that flow from north to south across the Site and are used as part of the existing land drainage system which will be diverted as part of the works. Excess surface water flows are proposed to be attenuated using permeable pavements, detention basins, swales and below ground attenuation tanks.

4.3.28 The permeable pavement will provide treatment to hydro-carbons that may enter the surface water system from trafficked areas. Open channels also provide treatment to surface water by exposing flows to UV radiation that further breaks down hydro-carbons. Further to this, the use of permeable pavements and swales reduces the need for traditional systems, e.g. gullies and linear channels, which pose a hazard to types of ecology that inhabit the site, for example the great crested newt.

EMISSIONS, WASTES AND EFFLUENTS

Atmospheric Emissions

4.3.29 An Air Quality assessment has been carried out for the Proposed Development which is provided within **Chapter 7: Air Quality** and aims to minimise air pollution in the following ways:

- Through a draft Construction Management Plan, which has been produced as part of the Planning Application (included as **Appendix 4.1**). This contains recommended measures for the appointed contractor to adopt to reduce impacts on air quality, including the management of dust and the minimisation of on-site energy consumption; and
- Through reduction of emissions during the operation phase of the Proposed Development (as set out in the Energy Strategy, which forms a standalone report submitted in support of the Planning Application).

Noise Emissions

4.3.30 A Noise Impact Assessment has been carried out for the Proposed Development which is provided in **Chapter 8: Noise and Vibration.** Noise and vibrations will be actively controlled, and will be minimised by the proposed landscaping which includes a number of measures (bunding and solid fencing) to screen noise from the Proposed Development.

Waste

4.3.31 A Waste Management Strategy has been prepared and submitted in support of the planning application, however a summary is provided below:

- The Proposed Development is expected to generate waste split into 54% refuse, 34% recycling and 12% food waste for restaurants and areas that are likely to generate food waste, and 54% refuse and 46% recycling for all other areas;
- Waste generated from the Proposed Development would initially be deposited and stored in refuse, recycling and food waste containers, sorting the waste at the source;
- The recycling waste stream will be segregated into three streams comprising glass bottles, paper and cardboard, and dry mixed recycling (DMR). DMR comprises items such as plastic bottles, plastic packaging and metal cans;
- Waste stores will be clearly labelled to ensure cross contamination of all waste streams is minimised;
- The Proposed Development will include three main waste stores; a store for food waste, a store for recyclable waste (DMR and glass) and an area for two compactors, one for refuse and one for cardboard and paper;
- A glass crusher will be provided in the waste store to reduce the volume of glass for collection;
- DMR will be compacted using in bin compactors to reduce the bin number requirements;
- Waste collection will take place three times per week; and
- The waste stores will be designed to BS5906:2005 Waste Management in Buildings - Code of Practice. In summary, the waste storage facilities will include the following:
    - A suitable water point in close proximity to allow washing down;
    - All surfaces sealed with a suitable wash proof finish (vinyl, tiles etc.);
    - All surfaces easy to clean;
    - Suitable floor drain; and
    - Suitable lighting and ventilation.

Effluent

4.3.32 The existing hotel and golf club discharges foul water to two on-site private pump stations. From here the effluent is pumped to the nearest Thames Water manhole (MH7601). This is also the proposed outfall manhole for the Proposed Development. In addition, the Proposed Development has been designed with a new separate below ground drainage foul sewer. The foul sewer will serve the hotel, waterpark and associated amenities.

PROPOSED STATUTORY SERVICES CONNECTIONS

4.3.33 No existing gas, electrical, water or telecommunication infrastructure has been identified within the Site boundary following the completion of a ground penetrating radar survey, hence no diversions are required to enable the Proposed Development.

4.3.34 A separate Utilities Statement has been submitted as part of the planning application which details the proposed utilities servicing. A summary of this has been provided below.

Gas Infrastructure

4.3.35 A new supply application for the Proposed Development has been submitted to Scotia Gas Networks who have confirmed that there is sufficient capacity in the network to meet the demands of the Proposed Development. Reinforcement will be required from the point of connection on the junction between Middleton Stoney Road and Vendeer Drive to the A4095.

Electrical Infrastructure

4.3.36 A Point of Connection application was submitted on behalf of the Applicant to the Distribution Network Operator (Scottish & Southern Electricity (SSE) Networks) and the response from SSE identified the reinforcement works (and associated costs) required to supply the Proposed Development, which has been accepted by the Applicant. The Point of Connection offer has secured a capacity of 6MVA for the Proposed Development. A study has been completed on the proposed route from the Point of Connection on Middleton Stoney Road to the Site, which appears viable.

Water Infrastructure

4.3.37 An irrigation main is located along the Site boundary with the A4095.

4.3.38 Following a pre-planning enquiry, Thames Water have been consulted and commissioned and are now in the process of undertaking a clean water hydraulic modelling study to further assess the impact of the Proposed Development on the existing network, and to identify the offsite reinforcement that is required in order to maintain similar level of service with the local Flow Management Zone (FMZ).

4.3.39 The Applicant signed an underwriting agreement with Thames Water in October 2019 that if the Proposed Development does not commence within the next 5 years, the Applicant will pay a pre-agreed sum of money to Thames Water for the hydraulic modelling work they have undertaken.

Telecommunications

4.3.40 The local telephone exchanges close to the Site are ‘Bicester’ (Exchange code SMBI), located on Queens Ave, Bicester and ‘Middleton Stoney’ ((Exchange code SMMSY), located on Heyford Road, Middleton Stoney. The presence of extensive local networks lends the Site to having a good level telecom connectivity.

WATER CONSUMPTION

4.3.41 Annual water consumption will be minimised through the adoption of the following measures:

- Low flow rate showers;
- WC's with 4.5l effective flush volume;
- Wash hand basin taps with flow rate of 8 l/s;
- Water efficient commercial dishwashing equipment;
- Water efficient commercial washing machines; and
- The adoption of regenerative media filter technology in the Waterpark in lieu of industry standard 'deep bed medium rate sand filters', to considerably reduce the amount of water required for the backwash process.

4.3.42 In addition to the above measures, the following additional infrastructure will be provided to assist the operations team with minimising water consumption through management procedures:

- Water sub-meters to water-consuming plant or building areas consuming 10% or more of the building's total water demand, linked to building management system, to facilitate monitoring and raise out-of-limit alarms.
- A leak detection system capable of detecting a major water leak would be installed on the utilities water supplies to detect any major leaks within the building, as well as between the building and the utilities water supplies (i.e. on the underground service pipe from the water meters at the site boundary to the point of entry into the buildings).

4.3.43 In response to pre-planning application feedback advice provided by Cherwell District Council's 'water resources' consultant (i.e. Tyrens), a proprietary surface water recycling system will also be adopted to significantly reduce annual water consumption across the Proposed Development.

4.3.44 In summary, water would be pumped from the main below ground surface water attenuation tank to serve toilet/WC cisterns throughout the Proposed Development, via a day tank and appropriate water filtration and water treatment equipment.

4.3.45 Further information on water consumption is provided in **Chapter 12: Water Resources, Flood Risk and Drainage**.

PROPOSED OPEN SPACE

4.3.46 Six ha of public parkland including nature trails is proposed in the north-western part of the Site. This will comprise a series of paths with interspersed benches. This parkland area will include play space that utilises natural features such as mounding, boulders and fallen logs, in combination with timber play equipment.

OPERATIONAL EMPLOYMENT

4.3.47 Once operational, the Proposed Development is anticipated to provide 460 full time equivalent jobs.

PRIMARY AND TERTIARY MITIGATION

4.3.48 The evolution of the Proposed Development has been influenced by a number of environmental factors, specifically biodiversity, landscape and traffic and transport. Further information on this is provided in **Chapter 3: Reasonable Alternatives** and the **technical chapters**.

4.4 PREVENTION OF MAJOR ACCIDENTS / DISASTERS

4.4.1 As detailed within **Chapter 2: Approach to the Assessment** and the Scoping Report **(Appendix 2.1)**, consideration has been given to the risk of major accidents and disasters relating to the following:

- Flooding (see above and **Chapter 12 – Water Resources, Flood Risk and Drainage**);
- Geological Events (see **Chapter 11 - Ground Conditions**); and
- Security.

SECURITY

4.4.2 During the design process, consideration has been given to the potential for threats to security of the Proposed Development and this informed the approach to the design of the following aspects of the Proposed Development:

- Vehicle parking management;
- Pedestrianised areas;
- Building façade;
- Integration of security infrastructure;
- Access control; and
- Procurement of security equipment.

4.5 PROPOSED STRATEGIES

4.5.1 A number of strategies are being prepared to support the ES as discussed in the paragraphs below.

FLOODING PREVENTION STRATEGY

4.5.2 A Flood Risk Assessment is included within **Volume 2: Appendix 12.1**. The Site is of low flood risk and is located in a Flood Zone 1, however the main flood risk to the Proposed Development is from groundwater flooding to the south east of the Site. This will be managed using a network of land drains installed beneath the proposed carparks sub-base. The strategy for managing the below ground drainage is provided in **Volume 2: Appendix 12.2**.

4.5.3 The proposed drainage strategy will offer a reduction in flood risk to all sources. It has been designed to ensure no flooding during a 1 in 100 year event and includes +40% allowance for climate change.

SURFACE WATER DRAINAGE STRATEGY

4.5.4 A Below Ground Drainage Strategy is included within **Volume 2: Appendix 12.2**. There is a low risk of surface water flooding across the Site. The Proposed Development proposes to discharge surface water via the existing drainage system, which mainly consists of land drainage that connects to a network of ditches and culverts before discharging to Gaggle Brook.

4.5.5 Excess flows are proposed to be attenuated on the Site using permeable pavements and geo-cellular storage tanks. Green roofs are proposed on the roof of the development; however, these do not form part of the Site wide attenuation strategy. The surface water drainage strategy to be applied across the Site is shown in **Volume 2: Appendix 12.2.**

FOUL WATER DRAINAGE STRATEGY

4.5.6 A separate foul water system is to be constructed as part of the Proposed Development. As there is no viable outfall in the immediate vicinity, this will outfall to an adoptable pumping station, from where it will be pumped via rising main to the nearest Thames Water manhole. The pumping station is to be offered for adoption to Thames Water and built in accordance with Sewers for Adoption 7th Edition.

LANDSCAPE STRATEGY

4.5.7 The Landscape Strategy for the Proposed Development aims to bridge the gap between built form and nature. This includes conserving and enhancing landscape components of value within the existing Site where possible, to include existing waterbodies; large areas of woodland / plantation; boundary vegetation and individual trees. The Proposed Development also seeks to establish a multi-functional framework of green infrastructure that strengthens ecological and landscape connectivity, improves landscape resources, reduces flood risk through integration of the Sustainable Drainage (SuDS) Strategy, and enhances visual amenity.

4.5.8 Extensive planting is proposed across the Site, including new woodland planting, which will comprise species including White Willow (*Salix alba*), Oak (*Quercus robur*) and Birch (*Betula pubescens*). Other shrub and tree species will be planted in the arrival spaces, car park, FEC open space and the public nature trail area.

4.5.9 Further detail is provided within the Design and Access Statement.

LIGHTING STRATEGY

4.5.10 The lighting design for the Proposed Development aims to make the Site safe, secure and accessible via a sustainable approach while minimising light pollution to residents and ecology. The design considers functional illumination and feature illumination.

4.5.11 Functional illumination will provide amenity style column lights, delivering a soft and welcoming aesthetic. Column lights will be provided at the main entrance (4m high) and in the main car park (6m high and 4m high in the south-eastern section), with the walkways leading from the main carpark illuminated by bollards. The service road will be illuminated by columns, with building mounted light (both positioned at 6m high) within the vicinity of the service yard.

4.5.12 The column lights within the main car park will utilise inbuilt photocells to ensure the lights only come on after dark and step dimming to provide automatic dimming (whereby the lighting fixture dims down to the next light level). The service yard will use illumination of 50 lux, which is a higher level of light compared to the main car park and service road (10 lux), although the service yard will only be lit at the 50 lux level when accepting deliveries outside of daylight hours, and the rest of the time the yard will be illuminated to 10 lux.

4.5.13 Feature illumination adds pockets of interest and focus across the Site and aids navigation to key locations across the Site at night-time. The feature elements of the main entrance and approach to the hotel will comprise of the following:

- Tree lighting;
- Feature sculpture illumination;
- Architectural lighting; and
- Concealed lighting details.

4.5.14 The external space immediately surrounding the north west of the FEC includes feature illumination elements in the following locations:

- Pathways;
- Bench lighting;
- Terraced areas;
- Trees; and
- Bridge lighting.

4.5.15 Further information on lighting is provided in the Lighting Design report submitted in support of the planning application.

BIODIVERSITY STRATEGY

4.5.16 A preliminary ecological appraisal (PEA) was undertaken for the Site in 2018, incorporating the results of a desk study and extended Phase 1 habitat survey. Based on the results of the PEA, a number of other surveys were undertaken in order to further characterise the ecological value of the Site. These included:

- Botanical walkover surveys;
- Bat roost surveys;
- Bat activity surveys;
- Badger surveys;
- Hazel dormouse surveys;
- Breeding bird surveys;
- Reptile surveys;
- Great crested newt surveys;
- Predictive System for Multimetrics (PSYM) pond macrophyte and macroinvertebrate surveys; and
- Terrestrial invertebrate surveys.

4.5.17 In addition, a biodiversity net gain (BNG) assessment has been undertaken to calculate the net change in biodiversity 'units' based on habitat removal and proposed creation and enhancement within the landscape plans. This was developed iteratively.

4.5.18 Based on the results of these surveys and the BNG assessment, a number of primary and secondary mitigation measures have been incorporated into the scheme design including:

- Precautionary methods of clearance during the construction phase, including sensitive timing of works;
- Retention of vegetation where possible, including existing trees, boundary vegetation and ponds;
- Creation of new valuable habitats and enhancement of retained ones including ponds, grassland and woodland to improve their value for wildlife;
- Planting of native species to encourage diversity of invertebrates and foraging habitat for pollinators in addition to breeding habitat for birds;
- Use of a sensitive lighting strategy to avoid spilling light onto retained/created habitats;
- Use of a sensitive drainage strategy to minimise impacts to fauna such as amphibians;
- Dropped kerbs to prevent fauna such as amphibians from becoming trapped on roads;
- Fence cut-outs to allow permeability around the site for mammals and other groups;
- Creation and maintenance of sandy scrapes to benefit invertebrates;
- Inclusion of bird and bat boxes with associated monitoring and maintenance;

- Creation and maintenance of brash piles and egg-laying heaps for reptiles and other groups; and
- Management of retained and created habitats in a wildlife-sensitive manner to maximise their ongoing value for flora and fauna. These measures are reflected in the HMMP and also in the Landscape Maintenance and Management Plan (LMMP) and include example measures listed below.

  - Low intensity mowing.
  - Minimal use of pesticides or fungicides.
  - Control and removal of non-native species.
  - Removal of litter.

4.5.19 Specific biodiversity management and monitoring measures (e.g. Great Crested Newt monitoring, bat box maintenance etc) have been incorporated into a Habitat Management and Monitoring Plan (HMMP) for the Site.

4.5.20 Further information regarding the protection of biodiversity during the construction and operation of the Proposed Development is provided in **Chapter 9: Biodiversity**.

ENERGY STRATEGY

4.5.21 An Energy and Sustainability Statement has been produced and submitted in support of the planning application submission and details the Energy Strategy for the Proposed Development. The Energy Strategy follows the principles of the Energy hierarchy: Be Lean, Be Clean, Be Green. The Proposed Development has been developed in accordance with the desire to achieve an energy efficient and sustainable development and incorporates features such as:

- An innovative heating and cooling system (using Reversible Air Source Heat Pumps (RASHPs) and a Water Source Heat Pump (WSHP)) will be provided to capture heat that would typically be rejected to atmosphere; the captured heat will be utilised to contribute towards the constant base heating and water heating throughout the year;
- Reversible Air Source Heat Pumps (RASHPs) will be adopted to generate chilled water;
- A dedicated air source heat pump will be provided to act as the lead heat source for the waterpark, with gas-fired boilers provided to act as the secondary heat source during peak demand periods, to maximise carbon reduction;
- The heating and cooling system for the Proposed Development will be electrically led; and
- It is proposed that a 1,000m^2 PV array will be provided on the south-facing pitched waterpark roof, to provide a renewable form of energy generation for electricity or hot water.

4.6 CONSTRUCTION PROPOSALS

PROGRAMME

4.6.1 Construction works are planned to commence in Q3 2020 on Site, and complete in Q4 2022, subject to the granting of planning permission by Cherwell District Council and the discharge of any relevant planning conditions. A summary of the indicative site preparation and construction programme is outlined in **Figure 4-19** below, with the Outline Construction Programme provided as **Appendix 4.2**.

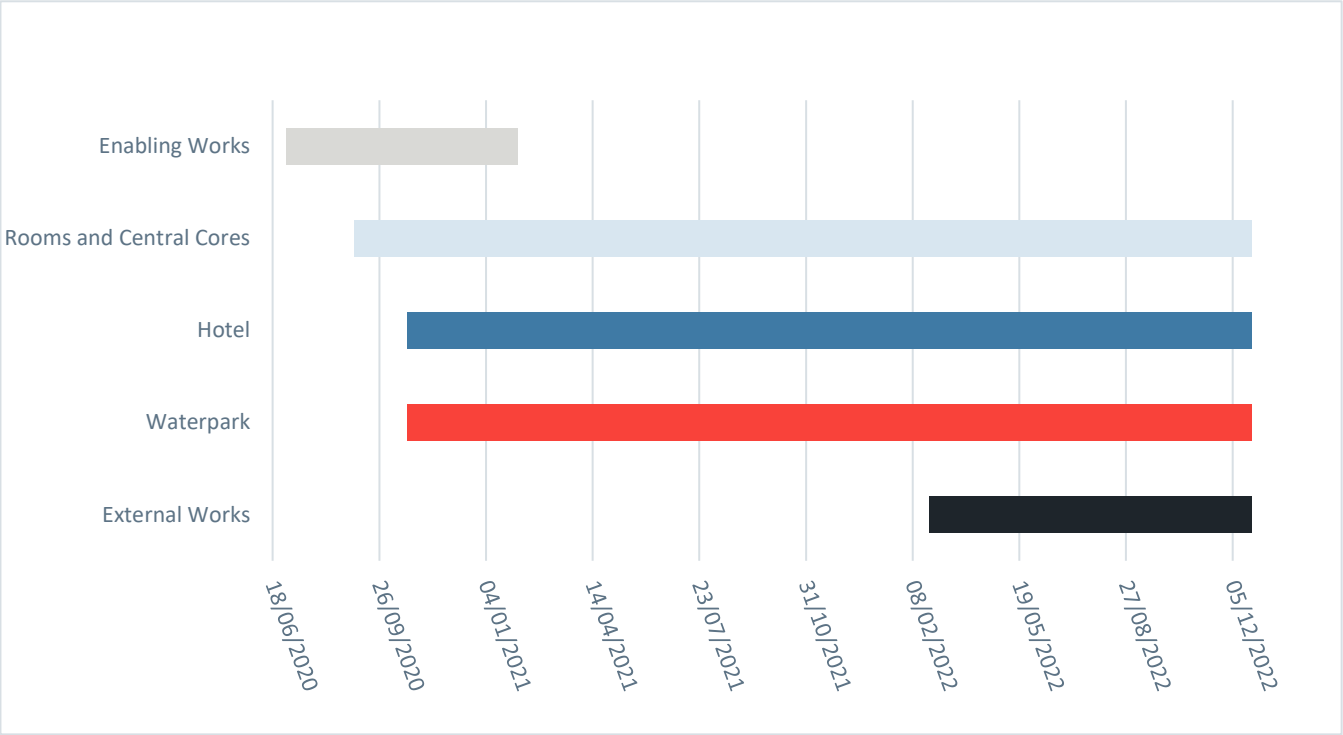


Figure 4-19 - Summary of the Indicative Construction Programme

4.6.2 This section considers the following key aspects of the proposed construction works:

- Site preparation, enabling works and mobilisation period starting in Q2 2020;
- Construction beginning Q3 2020 and finishing in Q4 2022; and
- Site completion and final opening year Q4 2022.

PROPOSED KEY CONSTRUCTION ACTIVITIES

4.6.3 The key construction activities are summarised sequentially below:

- Enabling Works;
- Ground and Foundation Works;
- Frame and Envelope; and
- Interior Fitout.

4.6.4 Where appropriate, these activities are discussed in further detail within the paragraphs below.

4.6.5 A series of assumptions have been made in relation to the proposed site preparation, earthworks and construction activities following discussions with the Project Team. Where assumptions have been made, that is stated in the technical chapters.

Enabling Works

4.6.6 Commencing in Q2 2020, the enabling works will comprise the following:

- Obtain a Great Crested Newt District Licence;
- Set up temporary utilities connections;
- Create temporary works access where the permanent access to the hotel will be located;
- Conclude site contamination surveys;

- Commence the Environmental Impact Assessment requirements to safeguard the habitat and local ecology which includes the construction of new ponds;
- Undertake any such activity as directed by the Archaeology Plan;
- Install the hoarding and fencing as appropriate to make the Site area secure and to keep the public safe; and
- Re-route the Public Rights of Way Footpath 161/6/10 around the working area maintaining separation of the public from the Site and highway, prior to commencement of the works.

Ground and Foundation Works

4.6.7 Following completion of the Enabling Works, it is intended that the Main Works will commence in September 2020 and will comprise of the following:

- Complete/adapt site set-up including compounds and site accommodation/welfare areas;
- Undertake any such activities as directed within the Archaeology Plan;
- Undertake any decontamination activities;
- Commence site earthworks and rock excavation;
- Remove any excess material from site (for reuse by other sites);
- Commence piling and foundation works, the spoil will be controlled and processed to mitigate any environmental impact. In addition, localised dewatering will be required and installed (due to the high-water table) to enable the excavations for construction of foundations and below ground services;
- Install grey and surface water tanks and swales/ponds;
- Construction of waterpark structure;
- Car Park rough surface for use during construction;
- Car Park surfacing; and
- Soft and hard landscaping.

Frame and Envelope

- Construction of the building frame;
- Exterior envelope construction; and
- Water Leisure facility creation.

Interior Fitout

- Commence interior fitout to all facilities;
- Complete water park facilities;
- Undertake fitout of the catering facilities;
- Commissioning and testing; and
- Deliveries of the furniture.

CONSTRUCTION ACCESS / HAULAGE ROUTES, PARKING AND TRAFFIC

4.6.8 The Bicester Hotel, Golf and Spa will remain open and operational throughout the construction works.

4.6.9 Construction access to the Site will be via a newly created entrance to the Proposed Development from the A4059, which will later be converted into the permanent entrance. Construction traffic will use two routes via J9 or J10 of the M40, along the B430 and A4095, as shown on **Figure 4-20** below.

4.6.10 The new site entrance on the A4095 will have a segregated pedestrian access for site operatives and visitors. This access will be manned permanently by security during working hours who will ensure that anyone entering the Site has signed in. There are no road closures anticipated for the Site, however if an operation requires a closure to ensure safety then the required application will be submitted.

4.6.11 Traffic entering the Site will be able to pull into a holding area to avoid disrupting traffic flow past the Site. As vehicles leave the Site, there will be a wheel washing and road sweeping facility to ensure any excess material leaving the Site is minimised.

4.6.12 Site parking will be within the Site compound (identified by the redline boundary) so it will not impede local roads. This will be in compliance with the Site Health and Safety Plan and under CDM regulation control.

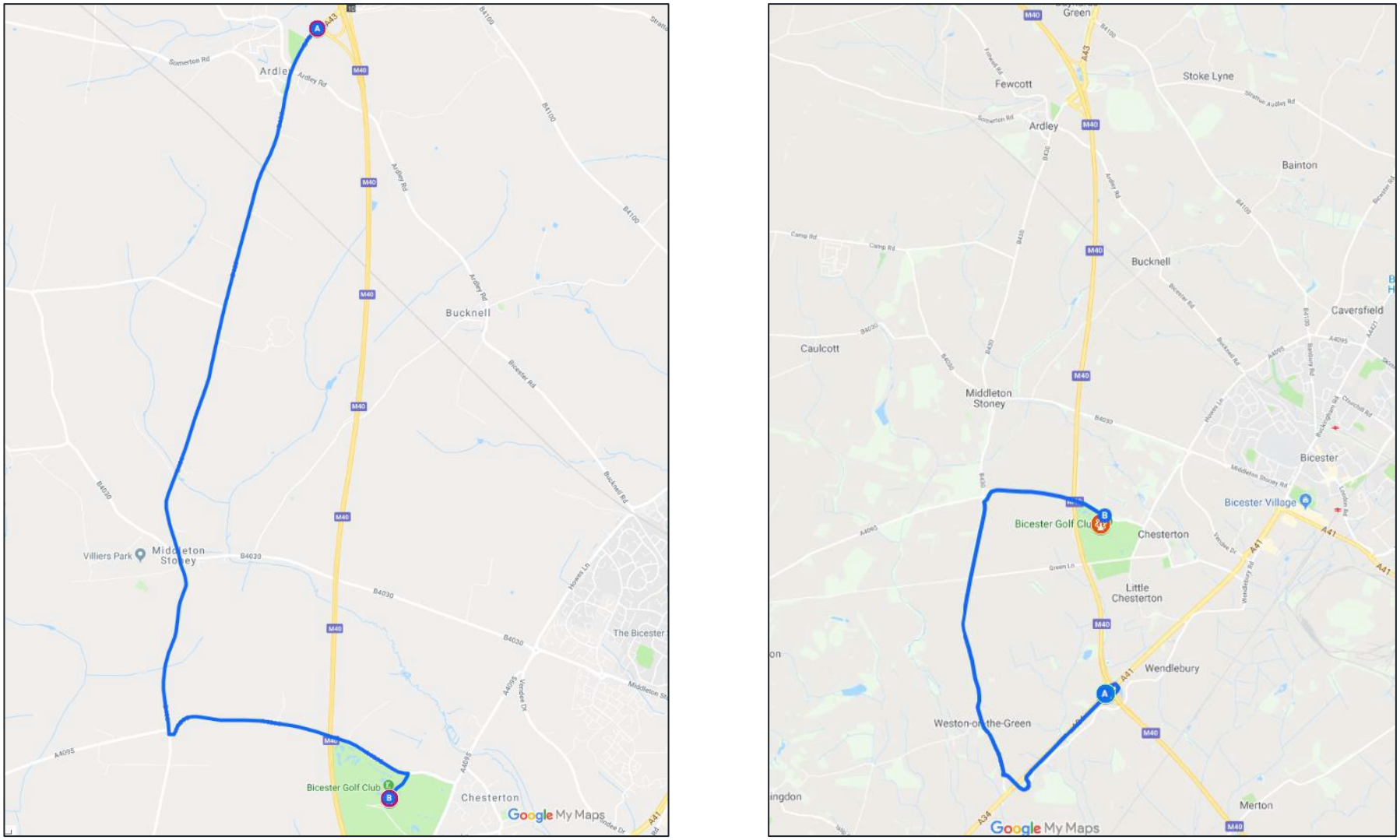


Figure 4-20 - Construction Traffic Routes

4.6.14 The site workforce will be encouraged to use Public Transport and car share. Companies which employ a significant number of workers (e.g. groundworkers, frame contractors, M&E contractor) will consider the use of “crew buses”. A shuttle bus may be employed to connect the Site to the Bicester North Station as shown on **Figure 4-21** below:

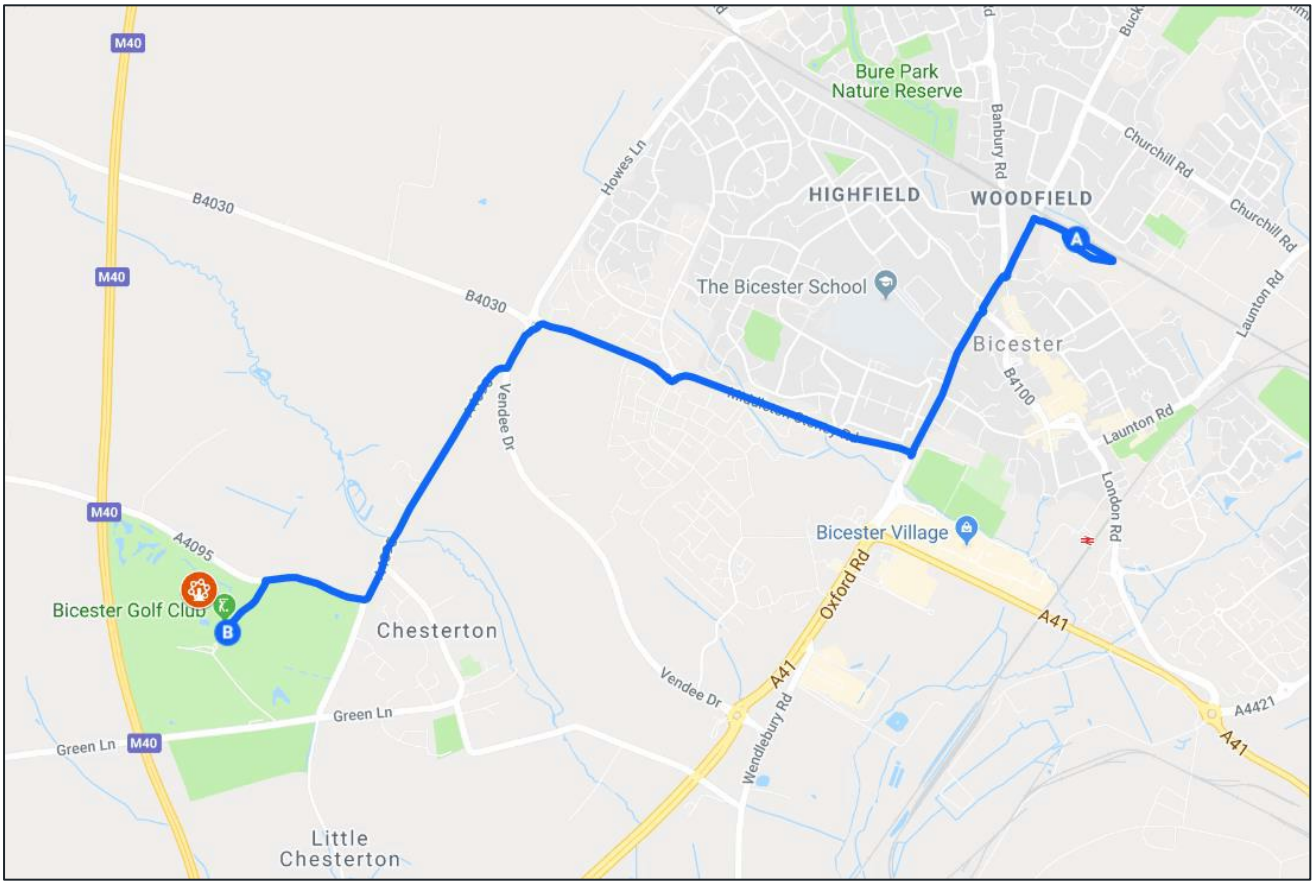


Figure 4-21 - Shuttle Bus Route

CONSTRUCTION COMPOUNDS

4.6.15 The Site construction compounds will be located within the red line boundary for the Proposed Development.

GROUND REMEDIATION WORKS

4.6.16 A Ground Investigation will be undertaken in advance of construction activities. If potential contaminant linkages are identified following the ground investigation a remediation strategy will be produced in agreement with the Regulators and National House Building Council and subsequent verification report requirements (In accordance with CLR 11) will be incorporated as a condition of planning.

TEMPORARY DRAINAGE SOLUTION

4.6.17 Temporary drainage solutions will be required for the construction works, which will be defined by the appointed contractor.

SITE CLEARANCE

4.6.18 Existing vegetation and trees at the Site will be retained where possible, however 91 arboricultural features will be wholly or partially removed as a result of implementing the Proposed Development. These features include trees, groups of trees, wooded areas and hedges of low to moderate quality.

VEGETATION REMOVAL, WORKS AND RETENTION

4.6.19 A Planting Strategy has been designed for the Proposed Development which includes planting a variety of native trees and shrubs. Furthermore, for the 5-year establishment period of the Proposed Development, a Landscape Management and Maintenance Plan (which incorporates ecological measures provided in the Habitat Management and Monitoring Plan (HMMP)) has been prepared and will be followed to ensure successful maintenance of landscape and ecological elements, maximising the overall quality and ecological value of the Proposed Development.

4.6.20 An Arboricultural Assessment has also been submitted as a standalone application report to support the planning application. This includes a Tree Protection Plan which identifies trees for retention and shows the location and extent of any proposed tree protection measures. Protection measures include areas where no dig surfacing should be applied.

EARTHWORKS AND SITE LEVELS

4.6.21 Construction will require earthwork activities which will involve removing 2m of earth across the developable area to reach the formation level. It has been assumed the piling mat will be 650mm deep.

4.6.22 Excavation will be required during the Site investigation; however, the locations and depths of those works are not currently known and will be completed as a condition to the planning application.

FOUNDATION SOLUTIONS

4.6.23 The Proposed Development will include piles of 450mm diameter, 12m deep for the accommodation areas, FEC areas and waterpark.

CONSTRUCTION PLANT / EQUIPMENT

4.6.24 Full details of the exact construction plant and equipment are not available at this stage of the development proposals and therefore a set of assumptions based on the type and scale of development have been made to enable the EIA to be undertaken.

4.6.25 **Table 4.4** provides a breakdown of the likely plant and equipment to be used for each stage of the construction works. This is set out in more detail in **Chapter 8: Noise and Vibration**.

Table 4-4 – Likely Construction Plant and Equipment

Work Stage	Plant / equipment assumed to be in operation
Enabling Works and earthworks	20 tonne excavator, bulldozer and dumper truck, Mobile Crane.
Substructure	20t excavator; mobile crane; bored piling rig; crane; and concrete pump and dumper truck.
Superstructure	Cranes; concrete pump; MEWPS; and material hoists.
Envelope	Cranes; MEWPS; and goods/passenger hoists.
Fit-out	MEWPS (cherry picker); and goods/passenger hoists.

DELIVERY VEHICLES

4.6.26 It is anticipated the following vehicles will undertake deliveries to and from the Site:

- Tipper wagon (approx. 15m^3);
- Concrete wagon (approx. 6m^3);
- Skip Wagon;
- HGV with flatbed trailer (approx. 30- 40t);
- HGV with curtained trailer (approx. 30- 40t);
- Rigid trucks; and
- Vans.

CONSTRUCTION WASTE

4.6.27 A separate Site Waste Management Plan will form part of the Principal Contractor's obligations and will be issued when completed by the Principle Contractor, when appointed. This will be monitored and adapted as the construction of the Proposed Development proceeds and will include measures including, for example:

- Waste materials to be segregated at suitable locations around the Site for disposal; and
- The loading of vehicles for the removal of waste to take place within the Site hoarding.

ENVIRONMENTAL MANAGEMENT

4.6.28 Several environmental management procedures will be implemented during the enabling works and construction phases of the Proposed Development, which are summarised in the following sections. A Draft Construction Management Plan is also provided in **Appendix 4.1**.

Biodiversity

4.6.29 The following measures will be adopted to safeguard biodiversity during construction of the Proposed Development:

- Pollution prevention methods including dust management measures such as 'damping down', safe storage of chemicals and suitable and regular personnel training on ecological issues and management/control measures.
- Precautionary methods of clearance - to further minimise risks to wildlife, some specialist vegetation clearance techniques will be used, and ecological supervision may be required.

- Fencing - hoarding or fencing will be installed around all construction works to protect the surrounding retained habitats. Gaps around the periphery of the Site to include gaps to allow for the movement of wildlife (e.g. badgers and hedgehogs).
- Avoidance of night-time lighting and avoiding positioning near sensitive receptors.
- Positioning of compounds on areas of comparatively low value existing habitat such as amenity grassland or bare ground/hardstanding and away from other sensitive receptors such as ponds or vegetated corridors at the Site boundary.
- Timing of works - in order to minimise risks to some groups such as hibernating reptiles or breeding birds, vegetation clearance should be carefully timed.

4.6.30 The potential for effects from construction activities on biodiversity has been fully assessed, the details of which are provided in **Chapter 9: Biodiversity** of this ES.

Noise and Vibration

4.6.31 Measures to minimise and control the level of noise during the construction of the Proposed Development include:

- All site activities that generate noise will follow British Standard (BS) 5228 to minimise impact on sensitive receptors;
- Hours of construction work on site will be restricted to day time hours from 08:00 to 18:00 on weekdays, and 08:00 to 13:00 on Saturdays. In exceptional circumstances, any works required outside of these days/hours will be subject to prior agreement with Cherwell District Council;
- All plant and equipment to be used for the works will be properly maintained, silenced where appropriate, and operated to prevent excessive noise and switched off when not in use and where practicable;
- Plant will be certified to meet relevant current legislation and Noise and Vibration Control on Construction and Open Sites (BS 5228) Standards; and
- All trade contractors will be made familiar with current noise legislation and the guidance in BS 5228 (Parts 1 and 2) which will form a prerequisite of their appointment.

The potential for construction related noise and vibration effects have been fully assessed and the details of which are provided within **Chapter 9: Noise and Vibration** of this ES. **Dust**

4.6.32 All relevant contractors will investigate opportunities to minimise and reduce the quantum of pollution, such as:

- Adopt best practice policies in respect of water (ground and surface) pollution and air quality (dust) pollution occurring on the Site;
- Wheel wash facilities and dust-damping at work face and across the Site to prevent the spread of dust from the Site.

4.6.33 The potential for construction related effects of dust are detailed within **Chapter 8: Air Quality** of this ES.

Water

4.6.34 Water resources will be protected from potential contamination during the construction activities. Measures to protect water resources include:

- The use of dedicated bunding zones in which all substances that could cause contamination (e.g. diesel fuel, oils,) will be stored on surfaced areas.

- Adoption of a Site Surface Water Management Plan.
- Pollution avoidance measures such as use of drip trays on all equipment where there is a risk of spillage, with site staff trained on required procedures in the event of a spill.

4.6.35 The potential for construction related effects on water resources have been considered and detailed within **Chapter 12: Water Resources, Drainage and Flood Risk** of this ES.

4.6.36 The potential for construction related effects on ground conditions has been considered and detailed within **Chapter 11: Ground Conditions** of this ES.

Energy

4.6.37 Opportunities to minimise the use of energy and water to be considered during construction are:

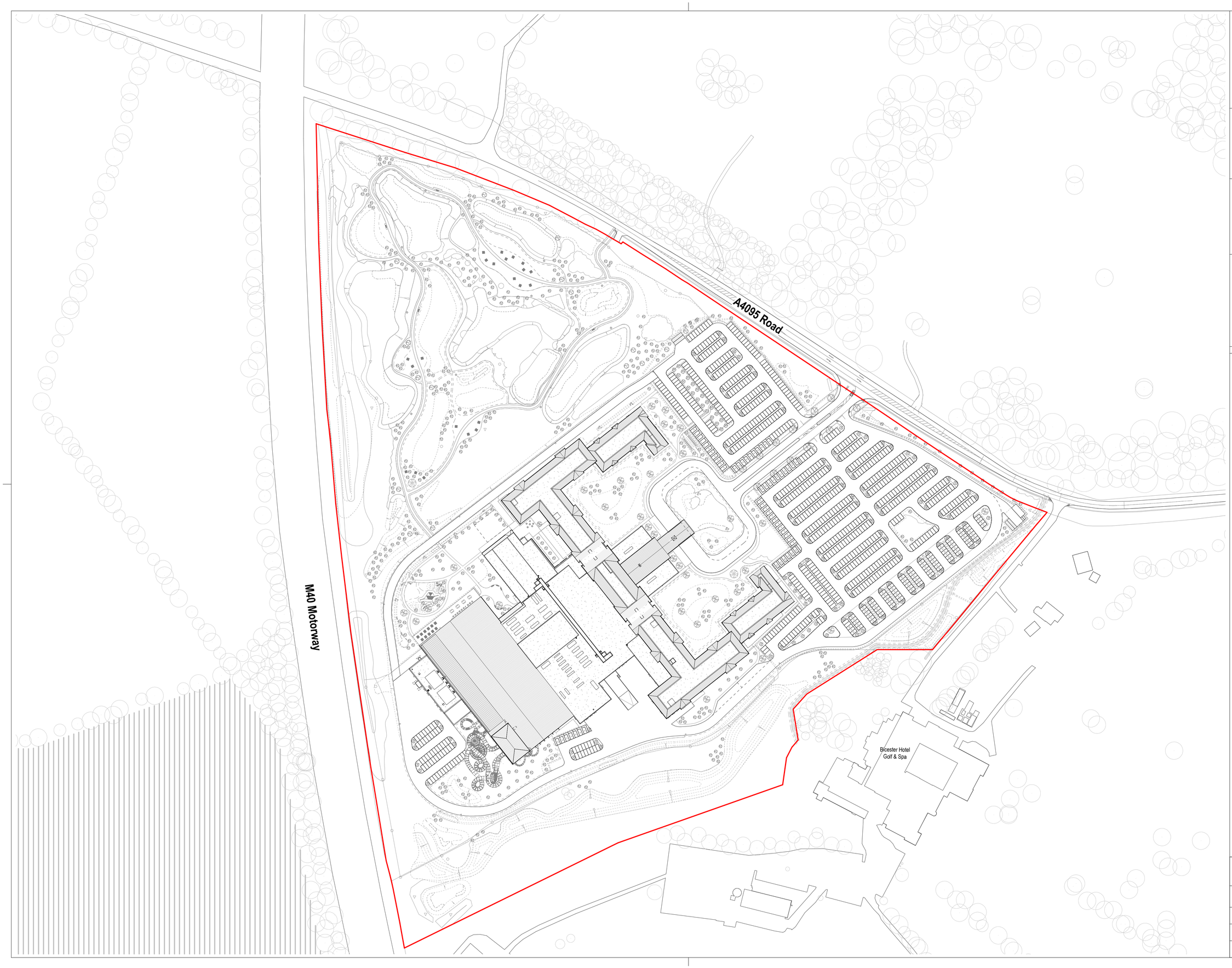
- Use of alternatives to diesel / petrol powered equipment such as electric powered equipment;
- Selection and specification of energy efficient plant and equipment; and
- Green energy policies for on-site staff and accommodation, for example use of sensor taps.

4.7 REFERENCES

- **Ref. 4.1**: HM Government (2017). The Town and Country Planning (Environmental Impact Assessment) Regulations 2017. [Online] Available at: http://www.legislation.gov.uk/uksi/2017/571/pdfs/uksi_20170571_en.pdf
- **Ref 4.2**: HM Government (1987). The Town and Country Planning (Use Classes) Order 1987. [Online] Available at: http://www.legislation.gov.uk/uksi/1987/764/made/data.pdf
- **Ref. 4.3**: Cherwell District Council (2016). Cherwell Local Plan 2011-2031. [Online] Available at: https://www.cherwell.gov.uk/info/83/local-plans

FIGURES

Figure 4-1 - Site Plan



Keyplan

North

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4. Tree locations & existing trees beyond site perimeter - indicative - for illustrative purposes only.

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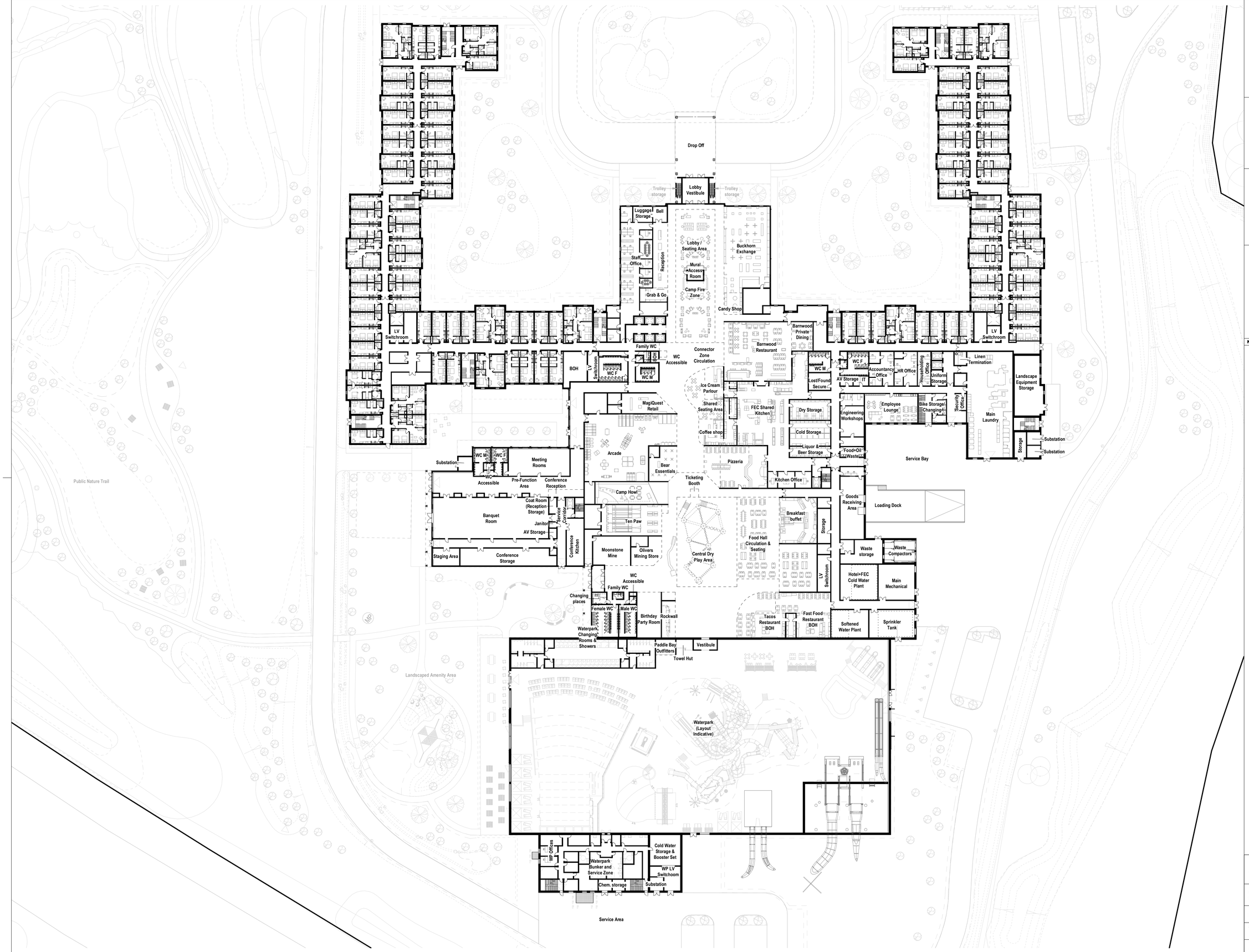
Proposed Great Wolf Lodge
Chesterton, Bicester, Oxfordshire

Proposed Site Plan

Scale @A1	Status	Revision
1:1250	Planning	3

Project Code	Originator	Zone	Level	Type	Role	Class.	Number
10875 -	EPR -	00 -	ZZ -	DR-	A -		TP-0102

Figure 4-2 - General Arrangement Ground Floor



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7. Furniture layouts are indicative and for illustrative purposes only.
8. Structural elements are indicative and for illustrative purposes only.

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Proposed Ground Floor Plan

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1:500	Planning	3

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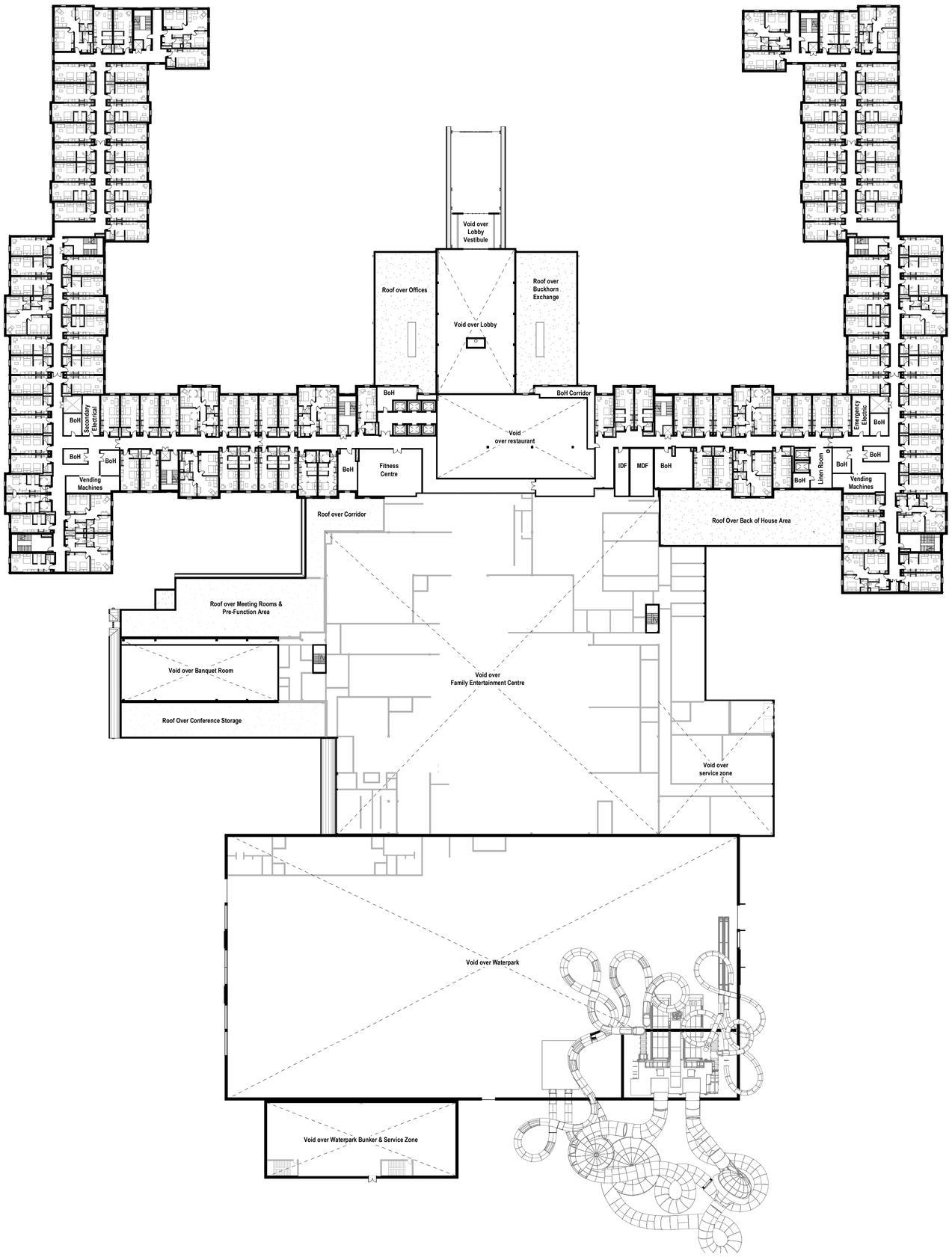
Figure 4-3 - General Arrangement First Floor



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6. Guestrooms layouts and furniture arangement are indicative and for illustrative purposes only.

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Proposed First Floor Plan

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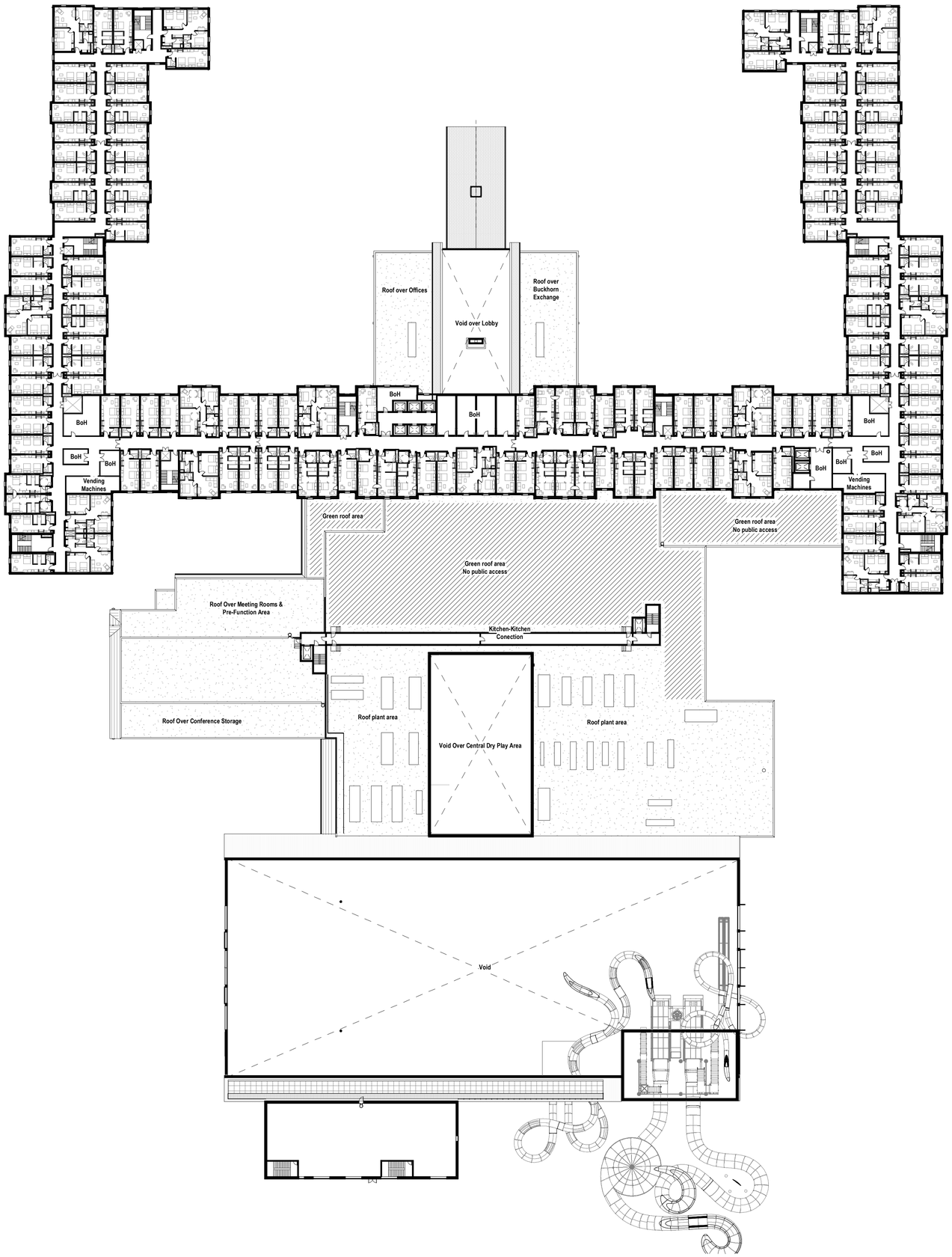
Figure 4-4 - General Arrangement Second Floor



Keyplan

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Proposed Second Floor Plan

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