

4 Alternatives

4.1 Introduction

- 4.1.1 In accordance with the EIA Regulations, this chapter describes the reasonable alternatives to the Proposed Development considered by the Applicant, prior to the selection of the final design. It also provides a description of the main reasons for the choice made, including a comparison of the environmental effects where relevant.
- 4.1.2 This chapter describes the main stages of design evolution and the following reasonable alternatives which are relevant to the Proposed Development:
- The 'No development' alternative, i.e. 'do-nothing scenario'; and
 - Alternative designs including the extent of developable areas, siting of schools, building heights, green infrastructure and other aspects.
- 4.1.3 The Site is allocated for development within the Cherwell Local Plan 2011-2031 (Part 1) Partial Review¹ ('LPPR') under Policy PR8: Land East of the A44 as a site for a new urban neighbourhood which includes an expansion of Begbroke Science Park. Alternative sites have therefore not been considered further by the Applicant. This approach was agreed by CDC in their Scoping Opinion. Reasonable alternatives to the site allocation were considered by CDC as part of the Local Plan process, however these are not considered further in this ES.

4.2 The 'No Development' Alternative

- 4.2.1 The Site comprises approximately 170 ha, including Begbroke Science Park (BSP), which is owned by the University of Oxford, located within the central northern part of the Site. BSP comprises low-rise laboratories, engineering facilities and administrative buildings and includes the Grade II listed Begbroke Hill Farmhouse. The remainder of the Site is in agricultural use for arable farming. A historical landfill site, known as Sandy Lane East, is located in the centre of the Site, south of Sandy Lane, approximately 250m south of BSP.
- 4.2.2 In simple terms, the environmental conditions in the absence of the Proposed Development would remain as per the existing and future baseline conditions, reported in Chapters 7 to 16 and Volume II of this ES. The majority of the Site is likely to remain in agricultural use with associated agricultural-led management of habitats. It is reasonable to assume that there could be some future growth at Begbroke Science Park in the absence of the Proposed Development although this is likely to be limited.
- 4.2.3 The Site forms part of an area allocated for growth in the LPPR. The Proposed Development has been designed to respond to the identified need for housing and other uses identified by CDC. The 'no-development' alternative is therefore not considered to be a reasonable alternative by the Applicant. If the Proposed Development did not go ahead, the predicted environment effects reported in this ES (refer to Chapter 18: Summary of Mitigation, Monitoring and Residual Effects) would not arise, although neither would the objectives of the Local Plan be met in terms of housing supply (including affordable housing) and employment. The Proposed Development will also deliver education and open space uses,

sustainable travel measures, and significant green infrastructure and biodiversity net gain benefits.

4.3 Design Evolution

Consultation and Engagement

- 4.3.1 The form and content of the Proposed Development evolved throughout pre-application stages and has been informed by environmental, transport and other technical studies undertaken as part of the design and EIA process. The development of the proposals for the Site have been the subject of comprehensive pre-application discussions with planning and other technical officers from CDC, OCC as Highways Authority, civic bodies, local community, and stakeholders. The proposals have considered the relevant advice from officers, stakeholders and communities and sought to address issues raised where appropriate.
- 4.3.2 Community and stakeholder consultation and engagement process was carried out in four distinct stages across July 2022, October - November 2022 and March 2023. The time between each stage was used to progress the draft masterplan proposals in response to the public engagement, as well as other site survey work and specialist research. The first iteration of the masterplan was shared with the public in October – November 2022.
- 4.3.3 The comments raised and feedback given during the community consultation has also been taken into consideration during the preparation and finalisation of the controlling documents (Parameter Plans, Development Specification and Strategic Design Guide) that form the basis of the outline planning application.
- 4.3.4 A Statement of Community Involvement (SCI) also accompanies the planning application which sets out feedback received from the pre-application consultation events. Further information on consultation is provided under ‘Assessment Methodology’ section of each technical chapter.
- 4.3.5 The key stages of consultation linked to the masterplan development were therefore as follows:
- Local Plan and Policy PR8 Site Allocation (September 2020) – collaborative involvement in defining principles of site allocation in LPPR;
 - Stage 1: July 2022 Consultation – initial consultation on core principles underlying development of masterplan of Proposed Development;
 - Stage 2: October – November Masterplan Optioneering (‘2022 Scheme’) – this included an initial illustrative masterplan informed by studies and consultation feedback to the July 2022 consultation and other engagement; and
 - Stage 3: Pre-Application Emerging Masterplan (March 2023) – the masterplan which forms the basis of the outline planning application for the Proposed Development and this ES.
- 4.3.6 A pre-submission preview was provided to stakeholders at an event in July 2023 (Stage 4). This provided an exhibition of the application proposals, including the illustrative masterplan and parameter plans, in advance of planning submission. However, no consultation

feedback was incorporated into the application documents from that event due to the close timeframes to submission of the planning application.

4.3.7 The key stages of masterplan development are described further below.

EIA and Design

4.3.8 The EIA process included baseline studies and analysis / modelling which informed the masterplan design process. The EIA process commenced with a constraints and opportunities review which was informed by initial environmental studies which examined the development capacity of the Site. These studies included:

- An initial Landscape and Visual Impact appraisal which included a Zone of Theoretical Visibility (ZTV). The ZTV and initial testing helped to inform the maximum height parameters and viewpoint locations considered in the LVIA, ensuring that the Proposed Development seeks to enhance the local landscape character and visual impacts of the Site.
- Ecological baseline studies and impacts and opportunities report which informed the siting of green infrastructure and the biodiversity strategy;
- Geo-environmental assessment of the historical landfill which informed the remediation strategy and its use as public open space;
- Initial transport assessment work which helped inform the integration of public transport modes and infrastructure near and within the Site. This had a core focus on creating a sustainable development through low car parking provision that maximises internal trips and minimises off-site vehicle trips onto the highway network;
- Agricultural soil and nutrient testing which informed the siting of the retained agricultural land and the allotment relocation;
- Noise modelling which informed the siting of the schools, setbacks of residential development from the A44 and railway line, and acoustic mitigation design principles to minimise adverse noise effects on future occupants;
- Drainage studies including infiltration testing and hydraulic modelling, which informed the drainage strategy and measures to ensure that the development avoids flood risk; and
- Desk-based heritage assessment which identified areas of potential archaeological interest and appropriate design principles measures to protect and enhance the setting of the Grade II listed farmhouse within the Site.

Local Plan and Policy PR8 Site Allocation

4.3.9 As set out in Chapter 1: Introduction, representations were made by University of Oxford, Merton College and The Smith Trust, collectively as the “Tripartite” to the LPPR process. The Tripartite are the majority landowners of PR3 and PR8 sites.

4.3.10 Following allocation of the Site as part of Policy PR8, Oxford University Development (‘OUD’) was formed as a joint venture partnership bringing together the land, vision and opportunities of Oxford University with the investment and development management skills of Legal & General (‘L&G’). The Applicant then proceeded to assemble a masterplanning, planning and technical team to develop the masterplan, undertake the EIA process and prepare the planning application.

4.3.11 The Proposed Development has been based on the PR8 site allocation (shown on Figure 1.3) that sets out the core principles of development (see Chapter 1: Introduction, paragraph 1.2.3). As such, alternatives considered by the Tripartite prior to the site allocation or during the LPPR process are not considered further in this ES.

Stage 1: July 2022

4.3.12 Initial consultation with stakeholders and interested parties was undertaken in July 2022. The fundamental concepts underpinning the masterplan were discussed at this stage with consultation feedback focussed on themes of housing delivery, transport and access, flood risk, green space, community infrastructure and employment.

Stage 2: October / November 2022 Scheme

4.3.13 Building on the core principles of Policy PR8 and the July consultation, development of the masterplan was taken forward and subject to community and stakeholder consultation in October / November 2022 (the '2022 Scheme').

4.3.14 The 2022 Scheme excluded approximately 17.4ha of third party land in the south of the PR8 site which will be subject to a separate planning application to be submitted by Hallam Land Management Ltd (see Appendix 3.4). This is expected to bring forward up to 300 new homes alongside a secondary access on the A44. The 2022 Scheme also excluded an area of existing residential development and associated land on Begbroke Crescent owned by Newcore Capital Management. Figure 4.1 provides the illustrative layout of the 2022 Scheme which was subject to public consultation.

Figure 4.1: 2022 Scheme – Illustrative Layout



4.3.15 The illustrative masterplan included multi-functional environmental and social design solutions designed to enhance the sustainability of the proposed development. This included minimising traditional ‘grey’ infrastructure, with sustainable surface water management strategies integrated into the landscaping, biodiversity and climate resilience measures. Development density was optimised to make the development more accessible to walking and cycling, reducing reliance on vehicle trips and leading to carbon savings. Uses were site to maximise accessibility, through a centralised local centre, public parks, and school sites. Sensitive receptors (e.g. schools, residential uses) were located away from primary transport corridors to minimise exposure to pollution sources whilst ensuring connectivity.

Stages 3 and 4: 2023 Pre-Application Scheme and Proposed Development

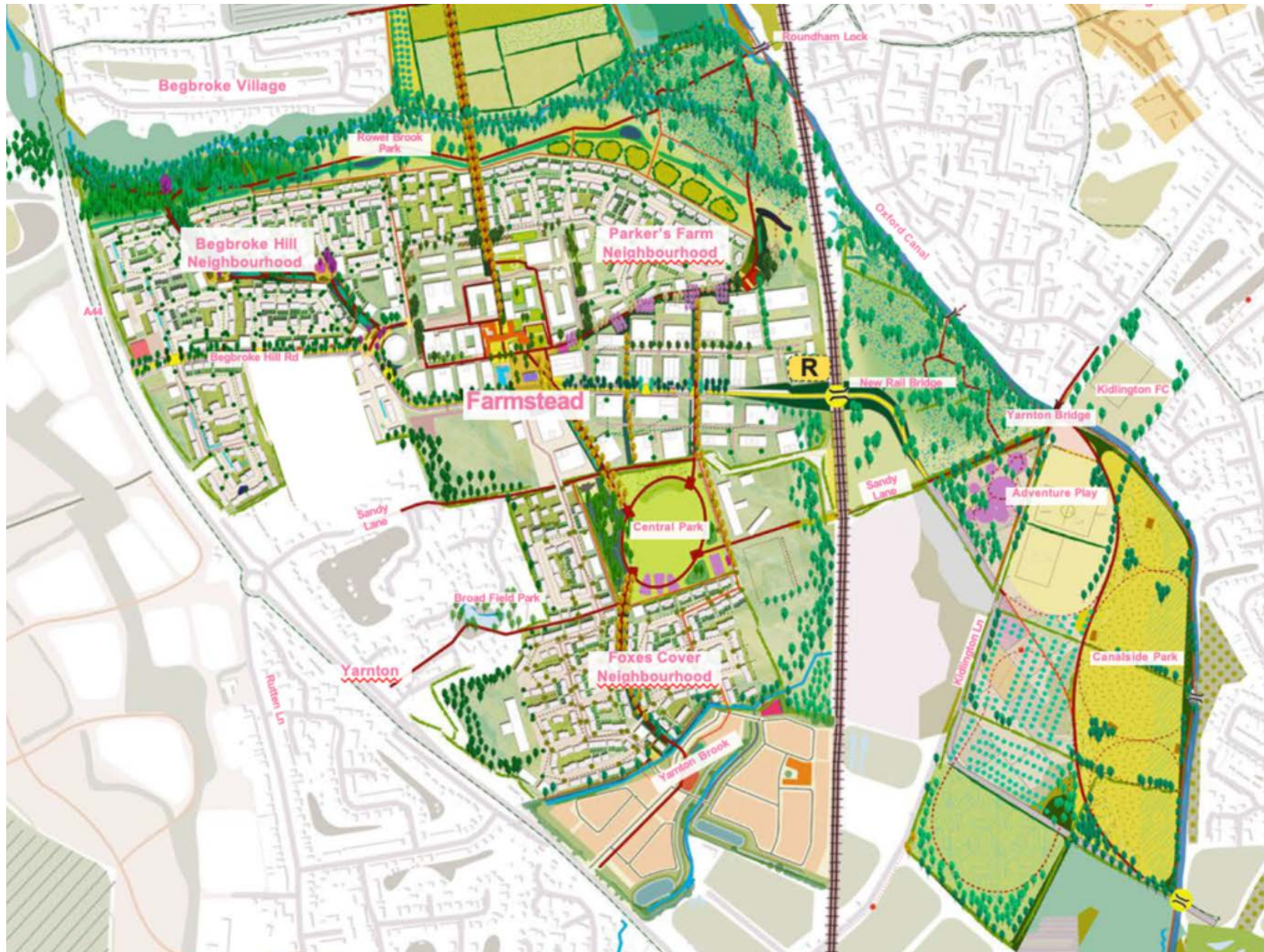
4.3.16 In March and July 2023, a series of pre-application public consultation events took place based on an illustrative masterplan and parameter plans which form the basis of the outline planning application and Proposed Development. The illustrative masterplan presented in March 2023, is shown as Figure 4.2.

4.3.17 The 2023 Pre-Application Scheme, as presented during the March and July consultation events, is generally in-line with the Proposed Development which forms the basis of the

outline planning application, comprising up to 215,000 sqm GEA residential floorspace, up to 155,000 sqm GEA of commercial, R&D, and office floorspace, educational floorspace, and up to 21,000 sqm GEA of community and amenity floorspace.

- 4.3.18 The controlling documents (i.e. Parameter Plans, Development Specification and Strategic Design Guide) that define the outline parameters of the scheme incorporate greater environmental controls to development, including proposed areas of land use, maximum height parameters, green infrastructure, and setbacks from sensitive frontages, taking into consideration stakeholder comments. Further details of the Proposed Development are provided in Chapter 5: Description of Proposed Development of this ES.

Figure 4.2 Illustrative Masterplan (March 2023)



4.4 Design Alternatives

- 4.4.1 Table 4.1 provides a description of the main alternatives considered by the Applicant and provides a comparison of the environmental effects where relevant.

Table 4.1: Comparison of Main Alternatives and Environmental Effects

Proposed Development Aspect	Description
Site extent and developable area	<p>Site Extent The initial masterplan prepared by the Tripartate and Applicant included the full PR8 site and therefore included third party land which as outwith the ownership of the Applicant. This enabled a comprehensive approach to masterplanning however, third party land was subsequently removed as it will be delivered by others. Two residential properties (88 Sandy Lane and an unnamed property near the Sandy Lane level crossing) were also removed from the Site boundary as they are not within the ownership of the Applicant and are not required as part of the Proposed Development.</p> <p>Developable Area The extent of the developable areas included in the Proposed Development were reduced during the masterplanning process on the boundaries of the A44 and railway to ensure adequate setbacks are in place. Setbacks were include to minimise adverse noise effects on new residential properties.</p>
Amount and type of land use: Expansion of Begbroke Science Park	<p>Policy PR8 states a requirement for 14.7 ha of expansion of Begbroke Science Park but does not state the amount of associated floorspace. The Applicant considered the future expansion needs of the Begbroke Science Park and explored how different options how this could be delivered which included differing levels of development density. Following landscape and visual and transport analysis, the Applicant concluded that higher densities would be appropriate in order to achieve sustainable development, the best use of land and placemaking objectives. As such, the outline planning application includes up to 155,000sqm GEA of floorspace in association with the expansion of the Begbroke Science Park. A mix of Use Classes B2, B8, E(g), and F1(a) is proposed for this floorspace to allow flexibility for the Proposed Development to meet future needs.</p> <p>In terms of location, no alternatives within the Site were considered for expansion of the Science Park due to the need to co-locate these uses with existing uses.</p>
Amount and type of land use: Education facilities	<p>The illustrative masterplan presented in the 2022 Scheme included one primary school and one 6FE secondary school which was based on meeting the needs of the Proposed Development. The Applicant has since included a second primary school in-line with the Policy PR8 which addresses strategic needs associated with wider regional growth.</p>

Proposed Development Aspect	Description
Siting of Education Uses	<p data-bbox="674 240 1240 272">Alternative Secondary School Locations</p> <p data-bbox="674 293 2078 437">Following consultation with OCC on the 2022 Scheme, an options appraisal of six different locations for the secondary school within the Site, as shown on Figure 4.4, was undertaken by the design team to identify the most suitable location. The options appraisal assessed each location against OCC design criteria for secondary schools, Policy PR8 and other Applicant requirements.</p>

Proposed Development
Aspect

Description

Figure 4.4: Alternative Secondary School Locations



The proposed location for the secondary school shown in dark green on Figure 4.4), between the historical landfill site (to become a new park) and the railway line, was chosen by the Applicant as the best option due to its relationship to the strategic open space and business park, phasing, access linkages and routes,

Proposed Development Aspect	Description
	<p>drainage and landscape design. Initial noise modelling also confirmed that the noise environment would meet relevant national guidance for schools (further details are provided in Chapter 10: Noise and Vibration).</p> <p>Alternative primary school locations</p> <p>The 2FE primary school was located in the south of the Site in the 2022 Scheme, close to the A44. This location has been revised so that it is further into the Site and away from the A44. The revised location would provides an improved noise and air quality conditions at the primary school location compared to the alternative siting close to the A44.</p>
Allotments, Retained Agricultural Land and Sports Pitch Location and Provision	<p>Initially, the Applicant proposed to retain farmland in the south of the Site. This area was in in Flood Zone 2 and had poor accessibility. It was also subject to soil testing as part of the EIA process and was found to be of poor soil quality (ALC Grade 3). As such, this location was discounted in favour of a location north of Rowel Brook which is of better soil quality (ALC Grade 2), enhanced access, and at less risk of flooding.</p> <p>The Yarnton Allotments are currently located within the western part of the Site, on the eastern side of the A44 between Yarnton and Begbroke. The Applicant initially considered retaining the allotments in their current location, however chose to relocate them north of Rowel Brook. This decision was made as it will enable the allotments to be linked to the retained farmland and community farm.</p> <p>The Applicant proposed initially that sports pitches to meet the needs of the Proposed Development will be delivered all on-Site. The Proposed Development now includes flexibility for the off-site delivery through a Section 106 legal agreement.</p>
Maximum building heights	<p>The maximum heights of the Proposed Development have been informed by analysis of topography, landscape and visual sensitivities, proximity to existing properties and the setting of heritage assets. No main alternatives have been considered to the maximum heights proposed by the Parameter Plans, although heights were increased in the area around Bebroke Science Park to allow additional flexibility in how the proposed floorspace of the Proposed Development can come forward. Proposed maximum building heights range from 13.5m to up to 22m above ground level (circa 3 – 5 storeys).</p>

Proposed Development Aspect	Description
Access and movement	<p>No main alternatives were considered in relation to access and movement during the design development. The main points of access and indicative location of the main vehicular and pedestrian access routes are in-line with Policy PR8. Key principles of the sustainable transport strategy were defined early in the design process to minimise vehicle trips and optimise accessibility within and to the Site by pedestrians and cyclists.</p> <p>Proposals for the location and layout of the pedestrian and cycle bridge over the railway at Sandy Lane are the responsibility of Network Rail who are bringing forward the planning application.</p>
Green infrastructure	<p>The green infrastructure strategy remains broadly unchanged from the 2022 Scheme for the Proposed Development. This overarching layout of strategic open space and connections include in the Proposed Development has been designed to safeguard existing areas of biodiverse habitat, parkland and sensitive areas, and provides future residents with the greatest accessibility to proposed new green amenity spaces. The addition of Central Park, introduction of green corridors, hedgerow retention and increased extent of green buffers within the parameters of the Proposed Development would be expected to result in a slight betterment in provision of green open space and effects on biodiversity relative to previous design iterations.</p>
Historical Landfill – Use and Remediation Options	<p>Feasibility Stage – Residential Use</p> <p>At an early stage of the masterplan, the Applicant explored the alternative of re-using the historical landfill (Sandy Lane East) for residential development, rather than use for public open space as proposed by the outline planning application. An options study was undertaken by contractors on behalf of the Applicant based on a geo-environmental assessment undertaken by Hydrock in 2021 to inform the emerging masterplan. This included a series of options for residential development on the historical landfill which included:</p> <ul style="list-style-type: none"> a) increasing site levels to enable maximum retention of materials; b) leaving the landfill at existing levels, with cut, processing of waste and fill as required; and c) bulk excavation of waste, treatment and re-engineering of the landfill. <p>Use of the landfill to residential development was discounted primarily due to costs associated with the remedial works required to make the landfill safe for this use. The Applicant chose instead to use the landfill as public open space which avoids the need to expose the waste and minimises the risk to the environment.</p>

Proposed Development Aspect	Description
	<p>Remediation Options for re-use as Public Open Space</p> <p>The Applicant considered alternative options for re-use of the landfill as public open space. This included:</p> <ul style="list-style-type: none"> a) Increase site levels to enable maximum retention of materials; and b) Remaining at existing site levels (this would involve a cut into the landfill materials and disposal of materials) <p>Option 1 was taken forward by the Applicant as the proposed strategy which involves removal of topsoil, ground improvement and placement of sub-soil and topsoil to an appropriate finished level avoids the need for significant excavation works and has a lower risk of mobilisation of contaminants.</p>
Flood Risk and Drainage	<p>Initial masterplan layouts were developed in advance of the completion of hydraulic modelling. Primary discharges outlets are into the Rowel Brook and Oxford Canal and no alternatives have been considered.</p> <p>The principles of the proposed surface water drainage strategy of the Proposed Development are broadly in-line with the 2022 Scheme, with an aim to utilise SuDS and reduce impermeable surfaces. It has also been informed by hydraulic modelling and designed to accommodate an increased climate change allowance in-line with the latest National Planning Policy Framework² and Planning Practice Guidance (PPG)³. This has influenced the location of sensitive uses, including implementing design principles and attenuation to avoid flood risk to the proposed location of the secondary school and minimise flood risk across other areas of the Site. It would also be expected to provide betterment to flood risk and drainage relative to previous design iterations.</p>

References

¹ Cherwell District Council, 2020. Cherwell Local Plan 2011-2031 (Part 1) Partial Review. September 2020

² Ministry of Housing, Communities and Local Government, (2021). National Planning Policy Framework

³ Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities & Local Government (DLUHC), (2021). National Planning Practice Guidance. Available online at: <http://planningguidance.planningportal.gov.uk/blog/guidance/environmental-impact-assessment/>