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ES Chapter 4 - Alternatives and Design Evolution

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THE CROWN
 ESTATE

East Hemel

4. Alternatives and Design Evolution

4.1 Introduction

4.1.1 Schedule 4, Paragraph 3 of Town and Country Planning (Environmental Impact Assessment) Regulations 2017¹ (the 'EIA Regulations'), states an Environmental Statement (ES) is required to include an outline of the evolution of a Site in the absence of the Development *"...as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge."*

4.1.2 Schedule 4, Paragraph 2 of the EIA Regulations also requires an ES to include:

"A description of the reasonable alternatives...studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects."

4.1.3 As identified above, the EIA Regulations do not require the identification of all possible alternatives, only those reasonable alternatives that were studied by the Applicant. In addition, the EIA Regulations require the ES to set out the main reasons for selecting the chosen option and to include a comparison of the chosen option against the reasonable alternative scenarios. This has been interpreted to mean that justification should be provided that the Development is appropriate and acceptable in comparison to other potential design iterations, and that an appropriate balance between environmental effects and commercial deliverability of the Development was reached.

4.1.4 Accordingly, this Chapter focusses on the following:

- The 'Do Nothing' / No Development scenario;
- Alternative sites; and
- Alternative approaches to design.

4.2 The 'Do Nothing' / No Development Scenario

4.2.1 This scenario covers the consequences of no development taking place on the Site and *"...an outline of the likely evolution thereof [of the Site] without implementation of the development as far as natural changes from the baseline scenario can be assessed..."* Although not strictly a 'reasonable alternative' considered by the Applicant, the EIA Regulations state that the ES must set this information out.

¹ The Town and Country Planning (Environmental Impact Assessment) Regulations. 2017.

4.2.2 Should the Development not be implemented, it would be expected that the Site would remain in its current use as described in **ES Volume 2, Chapter 3: Existing Land Uses and Activities** until alternative development proposals emerged.

4.2.3 Details regarding the future baseline conditions of the Site and its surrounds for all environmental topics scoped into this ES are provided within **ES Volume 2, Chapters 3 and Chapters 7 to 17**. A review was also undertaken of the environmental topic areas scoped into this ES, to determine the implications in terms of evolution of the environmental baseline conditions if the Development were not to come forward, as set out below.

Evolution of Baseline Conditions

Landscape and Visual

4.2.4 In the No Development scenario, the Site would remain as predominantly comprising open fields and farmland. As such, the existing landscape and visual conditions would remain and there would be no effects on landscape characteristics or visual amenity except that arising from committed developments in the vicinity of the Site.

4.2.5 Details of existing landscape and visual amenity conditions and attributes relevant to the Site are provided in **ES Volume 2, Chapter 7: Landscape and Visual**.

Ecology and Nature Conservation

4.2.6 In the No Development scenario, the ecological condition of the Site would remain as it is and, by association, no potential for a net gain in biodiversity beyond that which may emerge through natural ecological succession. Any such gain is likely to be restricted to field margins due to the agricultural use of much of the Site.

4.2.7 Details of existing ecological conditions and attributes relevant to the Site are provided in **ES Volume 2, Chapter 8: Ecology and Nature Conservation**.

Heritage and Archaeology

4.1.5 In the No Development scenario, the setting of the surrounding archaeological and heritage assets would likely remain largely unchanged. There is also the potential for unknown archaeological remains to be present beneath the Site which would remain undocumented.

4.1.6 Details of the existing heritage and archaeological conditions and attributes relevant to the Site are provided in **ES Volume 2, Chapter 9, Heritage and Archaeology**.

Transport and Access

4.2.8 A negligible number of vehicle trips are generated from the existing uses on the Site. Should the Development not come forward, it is expected that traffic conditions on-Site would not materially change from their current state. In a No Development scenario, there would, however, be no improvements to the A414 junction or the Nickey Line.

- 4.2.9 An assessment of the potential effects of the Development upon traffic conditions is included in **ES Volume 2, Chapter 10: Transport and Access.**

Air Quality

- 4.2.10 In the No Development scenario, it is expected that the ambient air quality would remain. Due to the nature of the Site, it does not significantly contribute to the existing air pollution in the area. Air quality is generally expected to improve with time, particularly through the introduction of more stringent vehicle emissions standards. Air quality conditions at the Site would therefore be expected to improve, even taking into account traffic relating to Cumulative Schemes in the surrounding area, and this is reflected in the predicted future baseline concentrations presented in the air quality assessment of the Development, provided in **ES Volume 2, Chapter 11: Air Quality.**

Noise and Vibration

- 4.2.11 In the No Development scenario, the ambient noise environment is not anticipated to alter from the current baseline. The Site does not currently emit noise with any regularity.
- 4.2.12 Over the longer term, it is conceivable that the advancement of 'quiet technologies' could lead to reduced road traffic noise (i.e. from electric vehicles) and reduced noise from the operation of building plant and machinery. Noting that the main source of noise within the Site is attributable to road traffic noise, in particular the M1 motorway to the east of the Site in the absence of the Development, there could well be a reduction in ambient noise within and in the locality of the Site, and beyond.
- 4.2.13 An assessment of the potential effects of the Development upon noise is included in **ES Volume 2, Chapter 12: Noise and Vibration.**

Agricultural Land Use

- 4.2.14 In the No Development Scenario, the Site would remain as comprising as mainly agricultural land use and there would be no loss of Best and Most Versatile (BMV) land due to the Development. Also, there would be no changes to the quality and availability of the soil.
- 4.2.15 An assessment of the potential effects of the Development upon agricultural land use is included in **ES Volume 2, Chapter 13: Agricultural Land Use.**

Water Resources and Flood Risk

- 4.2.16 In the No Development scenario, there would be no change to the drainage patterns or risk of negative impact on water quality. Conversely, the lower parts of the Site which is prone to surface water flooding during intense rainfall would not be improved by the Development's proposed Sustainable Urban Drainage Systems (SuDS) strategy.
- 4.2.17 An assessment of the potential effects of the Development upon hydrology, drainage and flood risk is included in **ES Volume 2, Chapter 13: Water Resources and Flood Risk.**

Climate Change

- 4.2.18 In the No Development scenario, there would be no potential for additional or avoided greenhouse gas (GHG) emissions associated with demolition, construction and operation of the Development. The Site would remain in its current largely undeveloped state and would continue to contribute minimally to greenhouse gas emissions.
- 4.2.19 Over the longer term it is conceivable that with technological advances to reduce GHG emissions and a strong behavioural / social agenda to reduce GHG emissions, GHG emissions in the wider area could well reduce.
- 4.2.20 A climate change assessment of the Development is provided in **ES Volume 2, Chapter 15: Climate Change**.

Socio-economics

- 4.2.21 In the No Development scenario, the socio-economic benefits (including its contribution to construction and operational employment and GVA, contribution to housing delivery, additional household expenditure and additional council tax receipts) of the Development would not be realised.
- 4.2.22 An assessment of the effect of the Development upon socio-economics is provided in **ES Volume 2, Chapter 16: Socio-economics**.

Health

- 4.2.23 In the No Development scenario, the contribution of the existing Site to determinants of human health would remain into the long-term. There would be no provision of infrastructure that contributes to positive health outcomes for the existing residents such as increased provision of healthcare facilities, public open space and sports pitches and new active travel routes.
- 4.2.24 An assessment of the effect of the Development upon health is provided in **ES Volume 2, Chapter 18: Health**.

4.3 Alternative Sites

- 4.3.1 East Hemel forms part of the Hemel Garden Community Growth Area. The Hemel Garden Communities (HGC) Programme is a proposal which will grow Hemel Hempstead and create attractive, sustainable new neighbourhoods to its north and east by 2050. The HGC Framework Plan is used to test and inform the policies and allocations in the draft SADC Local Plans. The SADC Local Plan is currently under examination and has been sent to the Secretary of State for Independent Examination on the 29th of November 2024. The St Albans Local Plan 2041 is expected to be adopted in March 2026. The Site falls within allocations H2 East Hemel Hempstead (North), H3 East Hemel Hempstead (Central) and H4 East Hemel Hempstead (South) under Strategic Policy SP3.
- 4.1.7 The Development is under the Applicant's ownership and has been specially designed in accordance with the current and emerging policy for the Site. As such an alternative site has not been considered by the Applicant.

4.4 Key Design Drivers

4.4.1 The Site has been identified for many years in local planning policy as being strategically important for increasing housing provision and employment opportunities within St Albans District and supporting existing communities in Dacorum Borough. The evolution for the design of the Development has responded to various site opportunities and constraints, which are summarised as follows:

Opportunities:

- The opportunity to enhance landscape and green infrastructure within the area by:
 - Creating a network of connected green and blue spaces for both people and wildlife, connecting into the wider area, retaining and enhancing valued habitats;
 - Creating new extensive country parks across the Site; and
 - Repurposing existing historic farmsteads for new community uses.
- The opportunity to reduce the severance caused by the A414 and the Redbourn Road with improved pedestrian and cyclist infrastructure and junction design whilst also strengthening connections between new and existing communities and creating efficient transport links into Hemel Hempstead and St Albans.
- The scale of the Site offers an opportunity to address the housing needs within St Albans District as well as providing supporting infrastructure to support the new and existing residents of Hemel Hempstead.
- The opportunity to create a mixed-use development which in addition to new housing offers local centres complementing farmsteads and a range of schools, healthcare, community and sports facilities. Also, a mixed commercial area offering a range of jobs and which supports new economies.

Constraints:

- Topography – there is an undulating topography throughout the Site with the exceptions of two plateaus in the central area and north of Punchbowl Lane. The steepest areas are in the north, descending towards the Nickey Line, as well as sloping into to the southern linear valley. In these areas, topography will impact the form of development but it is not steep enough to preclude development.
- Woodland and Trees – The Site boasts an abundance of valuable woodlands, hedgerows and mature trees which require careful offsetting and protection.
- Access and Movement – The A414 bisects the Site and requires an upgrade to the support the Hemel Garden Communities growth. Several historic lanes run through and adjacent to the Site.
- Heritage – The Site contains three collections of listed buildings. Wood End Farm in the north of the Site, Breakspears in the centre of the Site and Westwick Row Farm in the south of the Site. These buildings and their setting must be protected.

- Ecology – The Site contains valuable habitats in its woodlands, hedgerows and trees including badgers, birds and bats. The protection of these must be integrated into the Development.
- Noise – The Site is bordered to the east by the M1 motorway, consideration for the noise created by the M1 motorway will impact on the proximity type and location of development to the east of the Site.
- Drainage and Flood Risk – Two overland flow routes traverse the Site with one in the north around the Nickey Line and one in the south from Green Lane to the M1 motorway. The drainage function of these must be preserved.
- Infrastructure – The Site is adjacent to Buncefield Oil Terminal, which imposes restrictions on the form and type of development in its proximity. There are also nationally significant pipelines traversing the Site whose easements must be kept free of development. There are also National Grid powerlines and pylons which must be retained.
- Green Belt – St Albans Local Plan retains land in the northern extent of the Site as Green Belt and therefore is not developable with the exception of a secondary school and sports hub.

4.4.2 The opportunities and constraints for the Site have informed the consultation process, the feedback from which has influenced the overall design process and vision for the Development. The following design principles were followed:

- **Nurturing the Natural World** – Working with topography, hedgerows and lanes to create a characterful and resilient place with the inclusion of large parks and green spaces throughout the Development.
- **An integrated part of Hemel** – Safe and sustainable travel would be provided throughout the Development through a Sustainable Transport Corridor and strategic active travel routes and multi-modal transport interchanges.
- **Intergenerational Communities** – Each residential neighbourhood has been designed as 5-minute communities, with each cluster featuring a central space that offers local flexible community spaces.
- **A Place Shaped by Nature:** With Suitable Alternative Natural Greenspace (SANG) and extensive open space provision across the two neighbourhoods, almost half the area of East Hemel is shaped by open space and the Development would focus on equitable access to nature and building sustainably.
- **Active and Economically Thriving** – East Hemel will be a truly mixed-use development where facilities, jobs and destinations complement residential communities and create an active place to live and work.

4.5 Design Evolution

4.5.1 The Applicant and their Design Team have regularly liaised with both SADC and DBC, statutory consultees, key stakeholders and members of the public across a series of consultation events and pre-application meetings. Further details of the public consultation and stakeholder engagement undertaken is provided in the Design and Access Statement (DAS) and Statement of Community Involvement (SCI) which are submitted with the outline planning application.

4.5.2 A summary of design evolution of the Development is provided below:

- **Changes to the Red Line Boundary** – There has been a reduction in the Red Line Boundary to account for different land ownerships. The boundary to the east of the M1 motorway was amended to remove land that may be used for a highway crossing of the M1 motorway in the future. This reduced the size of the Site without reducing the size of the development parcels. Other changes to the Red Line Boundary included the changes to the north to include the land required for the new access junction from the B487 Hemel Hempstead Road (Redbourn Road). The boundary has been extended northerly to include access to North Hemel.
- **Nickey Line Crossing** – Following extensive surveys, it has been identified that there are a number of sensitive species and habitats located in proximity to the Nickey Line where the access road from the north of the Site would cross the Nickey Line. As a result, a number of design options were investigated including a route passing under or above the Nickey Line. However, the environmental implications of both options were greater than the at ground level route crossing the Nickey Line. Further details are provided in the DAS.
- **A414 Bridge Alignment** – A number of studies have informed the alignment of the safeguarded land for the bridge crossing the A414. The undulating topography meant it was more ideal to be built where the ground is higher. Located towards to eastern side of the A414 is a BPA pipeline. There cannot be any structures built within the pipeline easement; therefore, the bridge must be towards the west. There is also an existing hedgerow and attenuation pond to the western extent of the A414 and the proposed noise bund to the southern side of the A414. These factors constrain the alignment of the bridge to give its current proposed alignment.
- **Landscape and Open Space** – Following further ecology surveys, the green infrastructure strategy was reassessed and led to the widening of bat corridors, badger sett relocation and proposals for planning and wildlife interventions across the STC.
- **Slope and Topography** – The undulating topography of the Site led to further refinement of the movement networks to ensure the STC and strategic roads were accessible to all and located cognizant of the contours of the Site. The area of the site identified as suitable for primary education use within the Site was considered in several locations with the final proposal providing both a flat area and optimising overlooking of open spaces.

4.6 Conclusions

- 4.6.1 The consideration of alternatives has included the evaluation of a “no development” option and the design evolution through consultation with SADC and DBC, key stakeholders, the public and the key findings of the series of studies that make up the EIA has been outlined. A detailed description of the Development is presented in **ES Volume 2, Chapter 5: The Development** and **Chapter 6: The Works**.