

4 EIA scoping, consultation, alternatives and design

4.1 EIA scoping

- 4.1.1 In January 2017, a request for a formal EIA scoping opinion was submitted to Dacorum Borough Council (DBC) by Savills on behalf of the Applicant. The request was accompanied by an EIA scoping report which set out the proposed study of environmental issues for the residential and associated development on land south of Field's End Farm, west of Warners End and Chaulden, to the west of Hemel Hempstead. This was an update to, and complete replacement of, a previous scoping opinion received in August 2016.
- 4.1.2 Following liaison with consultees, DBC adopted its formal EIA scoping opinion on 16th March 2017 (Appendix 4.1). A summary of the responses received by DBC from internal and external consultees in relation to each of the environmental topics is provided below.

Table 4.1 DBC's EIA scoping opinion

Consultee	Summary of key comments / advice	Refer to ES paragraphs / section
Dacorum BC	<p>The Local Planning Authority would expect full details of the description of existing and surrounding area to be included in the ES. Full information should be included regarding existing site features, environmental conditions and the wider context of the site.</p> <p>The description of the development should be sufficiently detailed to ensure that the assessment can properly address potentially significant effects.</p> <p>The ES will need to establish accurate baseline information and provide an analysis of impacts for the life-cycle of the project from construction, through operation. This should include a comparison to the 'do-nothing' option.</p> <p>The EIA should consider the environmental impacts arising from construction and operation of the off-site highway works. In addition, a general indication of the timing and duration of phases will be required.</p> <p>ES should include a Code of Construction Practice and/or an appropriate Construction Environmental Management Plan (CEMP). However, given that it is intended to submit an outline planning application this may be covered at a later date.</p>	<p>ES Chapter 2 provides a description of the existing site, this is supplemented by the baseline sections within the specialist chapters</p> <p>ES Chapter 3 provides a full scheme description at 3.1.1 onwards</p> <p>Each ES chapter provides a baseline section relevant to the specific topic.</p> <p>ES Chapter 9, para 9.7.15-9.7.37 describes the off-site highway works which have been assessed in the specialist chapters. Table 9.13 describes the phasing of this mitigation</p> <p>The outline components of a CEMP are provided in the relevant chapters, and are summarised in Chapter 14, summary of mitigation. A full CEMP can be confirmed through a planning condition.</p>
Natural England	<p>The development site is in close proximity to the following designated nature conservation sites: Roughdown Common SSSI Ashridge Commons and Woods SSSI Chilterns Beechwoods SAC Little Heath Pit SSSI</p>	<p>ES Chapter 7, Ecology, confirms the proximity of various designated sites. Para 7.5.3 considers the impact on the Chiltern Beechwoods SAC and confirms that no significant adverse pollution</p>

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Hertfordshire Environmental Records Centre	<p>Should a likely significant effect on a European/Internationally designated site be identified or be uncertain, the competent authority (in this case the Local Planning Authority) may need to prepare an Appropriate Assessment, in addition to consideration of impacts through the EIA process.</p> <p>Details should be provided of how any adverse impacts on soils can be minimised.</p>	<p>effects arising from the Site on the SAC are anticipated.</p> <p>ES chapter 3 includes details of a soils resources plan at section 3.5.</p>
	<p><i>Protected Species</i></p> <p>The Environmental Statement should include an assessment of the likely impacts on the wildlife and geodiversity interests of local sites. The assessment should include proposals for mitigation of any impacts and if appropriate, compensation measures.</p> <p>The ES should assess the impact of all phases of the proposal on protected species (including, for example, Great Crested Newts, reptiles, birds, water voles, badgers and bats). Consideration should be given to the wider context of the site for example in terms of habitat linkages and protected species populations in the wider area, to assist in the impact assessment.</p>	<p>ES Chapter 7, Ecology provides an assessment of the potential impacts on protected species at section 7.5 and the necessary mitigation is confirmed at section 7.6.</p> <p>ES Chapter 7, Ecology provides an assessment of the potential impacts on habitats at section 7.5 and the necessary mitigation is confirmed at section 7.6.</p>
	<p><i>Habitats</i></p> <p>Phase 2 habitat survey to be carried out on the site. The Environmental Statement should include details of: Any historical data for the site affected by the proposal (eg from previous surveys). Additional surveys carried out as part of this proposal. The habitats and species present. The status of these habitats and species (eg whether priority species or habitat). The direct and indirect effects of the development upon those habitats and species. Full details of any mitigation or compensation that might be required.</p>	<p>ES Chapter 7, Ecology provides an assessment of the potential impacts on habitats at section 7.5 and the necessary mitigation is confirmed at section 7.6. Paragraph 7.3.18 confirms the completed fieldwork.</p>
	<p><i>Local Biodiversity</i></p> <p>The future of Shrub Hill Common LNR must not be compromised as a result of any development proposals. The impact of potential fragmentation on this site must be considered, in addition to the increase in pressure.</p> <p>Lighting must be considered in relation to the effect it could have on ecological features.</p>	<p>ES Chapter 7, Ecology provides an assessment of the potential impacts on habitats at section 7.5, with Shrubhill Common addressed in sections 7.5.16-7.5.20</p>
	<p><i>Air Quality and Climate Change</i></p> <p>The assessment should take account of the risks of air pollution and how these can be managed or reduced.</p> <p>ES should reflect the principles of the England Biodiversity Strategy published by Defra for the consideration of</p>	<p>ES Chapter 7, Ecology provides an assessment of the potential impacts including air pollution at section 7.5.</p>

Consultee	Summary of key comments / advice	Refer to ES paragraphs / section
	biodiversity and the effects of climate change. The ES should identify how the development's effects on the natural environment will be influenced by climate change, and how ecological networks will be maintained.	
DBC Environmental Health	A Contamination Phase I Desk Top Study should be undertaken, and should comprise a detailed account of any potential (current or historical) contaminative uses of the site or near vicinity. The findings should be used, together with the redevelopment proposals, to create an initial conceptual site model for the site and associated preliminary risk assessment. The Phase I Desk Top Study Report should be submitted as an appendix to the Environmental Statement.	Appendix 2.1 provides the required Phase 1 and Phase 2 Geo-Environmental Assessment
DBC Conservation and Design Historic England	<p>The Environmental Statement should contain a thorough assessment of the likely effects which the proposed development might have upon those elements which contribute to the significance of heritage assets.</p> <p>In addition to designated built heritage features, the ES should consider the effects on the following non-designated features: Stables and barns associated with the listed Pouchen End Fields End Farm complex The West Coast Mainline to the south The Grand Union Canal</p> <p>The assessment should also take account of the potential impact which associated activities (such as construction, servicing and maintenance, and associated traffic) might have upon perceptions, understanding and appreciation of the heritage assets in the area.</p> <p>In terms of archaeology, the existing desk top assessment, geophysical survey should be submitted together with an updated archaeological statement that considers the results of field investigations previously undertaken.</p>	Chapter 8 assesses the impact of the proposed development on archaeology and heritage. Paragraph 8.5.4 onwards considers built heritage features including those listed. Paragraph 8.4.1 onwards describes the archaeological field investigations completed at the Site.
Natural England DBC	<p>Details to be provided of local landscape character areas mapped at a scale appropriate to the development site as well as any relevant management plans or strategies pertaining to the area.</p> <p>The EIA should include a full assessment of the potential impacts of the development on local landscape character using landscape assessment methodologies.</p> <p>The Environmental Impact Assessment process should detail the measures to be taken to ensure the building design will be of a high standard, as well as detail of layout alternatives together with justification of the selected option in terms of landscape impact and benefit.</p>	Landscape character is assessed in Chapter 6, Landscape and Visual. Local landscape is addressed in chapters 6.4.12 onwards. Figure 6.2 places the Site in the context of the Dacorum Landscape Character Assessment. The scheme evolution is described in section 4.3 below.
Chilterns Conservation Board	<p>The Chilterns Area of Outstanding Natural Beauty (AONB) is within 750m of the application site. As such, environmental impacts on this landscape, including visual impacts, noise and light pollution, increase in traffic and the effect on wildlife should be considered.</p> <p>The ES should address the issue of whether the green swathes that incorporate the footpaths, hedgerows and mature trees are truly viable both from a nature conservation viewpoint and so as not to bring people, their property and trees particularly, into conflict.</p>	<p>Potential landscape effects following construction are set out in Appendix 6.1 Table 6.21. Para 6.7.2 confirms the residual impact on the AONB.</p> <p>ES Chapter 7, ecology includes consideration of hedgerow and connectivity and describes enhancements at para 7.6.49 onwards. ES</p>

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		Chapter 6, Landscape and visual considers effects on the footpaths at paragraph 6.5.18.
DBC	The landscape and visual impact assessment should assess a number of viewpoints, the positions of which were originally agreed with Dacorum Borough Council. Two of these viewpoint photographs should be accompanied by two illustrative photomontages from more distant viewpoints to the south, such as Little Hay Golf Complex and Sheethanger Common.	Chapter 6, Landscape and visual considers effects on the viewpoints agreed with DBC, with views recorded and described in Figures 6.8-6.52, with illustrative photomontage provided at figure 6.36 and 6.39.
Hertfordshire Lead Local Flood Authority	A surface water drainage assessment should be carried out.	ES Chapter 12, Hydrology, flood risk and drainage includes a surface water drainage assessment within the Flood Risk Assessment at Appendix 12.1.
Highway England	An assessment needs to be undertaken to understand the scale of potential impact of the development on M25 J20 and M1 J8. Though it is acknowledged that concerns from Highways England may have been addressed through on-going pre-application discussions.	Pre-application correspondence with Highways England confirmed that an assessment of these junctions was not required.
Hertfordshire County Council Waste and Minerals	Waste management relating to waste generated during construction and subsequent occupation should be considered. This may be supplemented with a Site Waste Management Plan (SWMP) at a later date or could be required by planning condition.	It is considered that this can be dealt with through a standard planning condition.
Thames Water	The ES should include consideration of the following matters: The surface water drainage requirements and flood risk of the development both on and off site and a demonstration that this can be met Any piling methodology and a consideration as to whether this will adversely affect neighbouring utility services.	ES Chapter 12, Hydrology, flood risk and drainage includes a surface water drainage assessment within the Flood Risk Assessment at Appendix 12.1 ES Chapter 10, Noise and vibration confirms that vibration is not anticipated at paragraph 10.5.9. ES Chapter 3, Scheme description, Section 3.4 confirms foundation types which excludes piling.
Network Rail	Assessment of Travel and Transport to take into consideration: the impacts of increased footfall at both Hemel Hempstead and Berkhamsted railway stations potential to result in an increased use of nearby bridges over/under the railway Advised that consideration is given to the impacts of the existing operational railway (and any potential increases in usage) within the Noise and Vibration Assessment for the site.	ES chapter 9, Transport considers public transport matters and highways impacts. The matters raised regarding station footfall and use of bridges is not considered a significant EIA issue and was scoped out of further assessment. ES chapter 10, Noise and Vibration includes an assessment of railway noise and vibration at paragraphs 10.3.16 and 10.4.9.

Consultee	Summary of key comments / advice	Refer to ES paragraphs / section
National Grid	Reference to how limitations on buildings, structures and landscaping within major accident pipeline easement have been addressed to maintain safety and security.	ES Chapter 3, Scheme description includes consideration of the gas mains constraint at paragraphs 3.3.8 and 2 3.9.9; with the scheme evolution described further in this chapter in the Sections below.

Ongoing consultation and identification of potential environmental effects

- 4.1.3 Further explanation to clarify how the scope of the information provided by the ES has evolved after the initial scoping exercise is provided in the following paragraphs.

LANDSCAPE AND VISUAL EFFECTS

- 4.1.4 During the EIA scoping process, DBC was consulted on the methodology and associated terminology for undertaking the Landscape Visual Impact Assessment. Initial consultation principally involved discussions regarding the selection of representative viewpoints of the site and Proposed Development. In the latter stages of the assessment it was agreed on 9 February 2017 that two viewpoints would be accompanied by illustrative photomontages. In addition, as described in Chapter 6 at para 6.3.42-6.3.44, it was agreed that a separate lighting assessment would not be required.

ARCHAEOLOGY AND HERITAGE

- 4.1.5 With the completion of archaeological field investigations at an early stage (see ES Appendix 8.1-8.3), detailed discussions have been held with the Local Authority's Archaeological Adviser regarding the requirements for mitigation. These discussions have included meetings and have been recorded in the scoping opinion described above, and subsequent email communication. The scoping opinion records the position of the Local Authority's Archaeological Adviser that the investigations 'have provided sufficient information to enable informed recommendations to the Planning Authority in the event of a planning application being submitted'. Subsequent liaison has confirmed that the only areas of the Site requiring further investigation prior to the commencement of development are those shown in Figure 8.3.

4.2 Difficulties encountered in compiling the information for the EIA

- 4.2.1 In terms of the air quality assessment one main factor that can influence its accuracy is the background concentrations that need to be added to the emissions generated by the traffic flows. Background concentrations have been derived from approved published sources for this data, in accordance with Local Air Quality Management guidance. Higher values would lead to higher ambient concentrations. However, the background concentration is common to both the baseline and with development scenarios for the same year, and affects the results to the same degree. Consequently, it is the change due to the Development traffic that becomes the principal factor for establishing scheme impacts.

4.3 Alternatives and scheme design / iteration

4.3.1 Iterations of scheme design are often made when EIA and consultation are undertaken at an early stage of preparing a planning application. Where this results in the avoidance or reduction of potential significant effects, these can be described as alternatives. Alongside the technical assessments, the design process is influenced by community consultation and through discussions with DBC and statutory consultees. Certain elements have remained a constant feature of the scheme layout from the initial stages - the open green corridor and landscaping along the route of the underground gas pipeline for example. A summary of the key aspects of the layout considered during the evolution of the scheme design are set out below.

4.3.2 Dacorum BC compiled the '*Local Allocation LA3 West Hemel Hempstead Draft Master Plan*' in partnership with the Site landowners and promoters, which was published in October 2015. The purpose of the document was described as follows:

'The purpose of this master plan is to supplement the Site Allocations DPD by setting development principles and a framework through which a high quality residential scheme can be delivered on the site. It is also intended to demonstrate how the planning requirements set out in the Site Allocations DPD can be delivered and will guide future planning applications, and has been prepared:

- *to explain new settlement and green belt boundaries;*
- *to outline requirements for the planning and delivery of the area;*
- *to outline layout possibilities;*
- *to facilitate discussion of the above with the public;*
- *to provide justification for the planning requirements; and*
- *to guide future planning application(s).'*

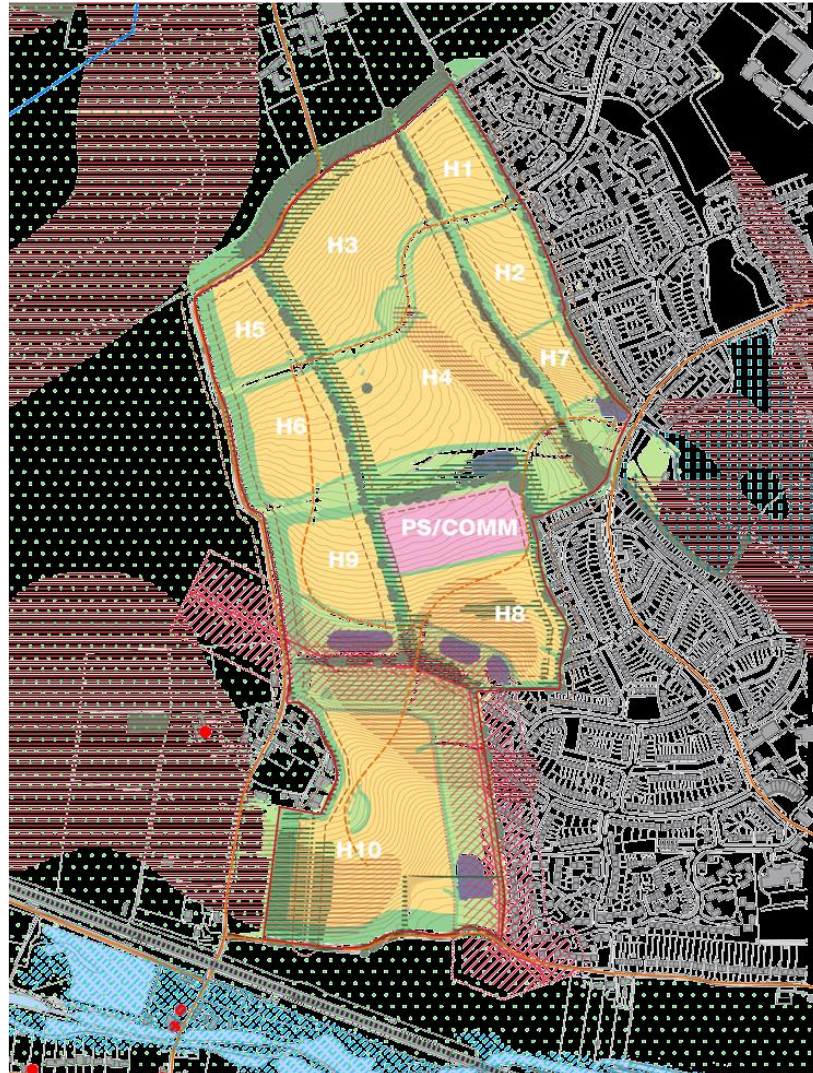
4.3.3 It goes on to state:

'The final master plan will be adopted by the Council as supplementary guidance. Whilst planning applications on the site will be considered against Development Plan policies, this document provides further detail pursuant to those policies and has been the subject of public consultation. As such, it will carry weight as a material consideration, when planning applications are determined.'

4.3.4 The document included an indicative land use and access plan (see figure 4.1 below), and the key parameters included provision of:

- 900 homes in a mix of two storey and three storey housing.
- a shop, doctors surgery and additional social and community provision, including a new primary school.
- a soft edge to the Green Belt and the extended open space.
- no vehicular access from Pouchen End Lane.
- provision of new open space / playing fields.
- new strategic landscaping to mitigate the impact on the Bulbourne Valley.
- local road junction improvements.
- extension of Shrubhill Common Nature Reserve and create wider green infrastructure links.

Figure 4.1: Site layout iteration 1 as shown in the DBC Local Allocation LA3 West Hemel Hempstead Draft Master Plan



4.3.5 Following the decision to prepare a planning application the consultant team undertook a review of the SPD masterplan, testing deliverability of key components and also tested against emerging technical detail, such as initial baseline information such as ecological and other survey work. The conclusions of this exercise were:

- location of Community Hub to be reviewed to enhance visibility and viability;
- school to be located on the flattest part of the site to ensure the delivery of associated playing fields without incurring unnecessary costs to create level space;
- review with Health and Safety Executive (HSE) requirements for gas mains easement;
- review requirements and SUDS features;
- testing the alignment of the primary access route and response to site contours.

4.3.6 The review tested various options for the community hub location and identified a preferred location focused on the flattest part of the site, visible from the main entrance from Long Chaulden and linked into the primary street network to allow for public transport. The broad location of the surface water attenuation features and ecological constraints were also incorporated.

Figure 4.2: Site layout iteration 2 (February 2017)



- 4.3.7 The next main iteration of the masterplan was produced in February 2017 (See Figure 4.2 above) and brought together the SPD masterplan principles, with the benefit of further technical input from the EIA consultant team, and discussions with DBC and Hertfordshire County Council (highways and education) and the Health and Safety Executive's requirements regarding the gas mains and easement requirements (see para 3.2.9 of ES Chapter 3: Scheme description chapter). The key changes delivered in this masterplan iteration included:
- Local Centre located to the west of primary entrance and inclusion of school;
 - Alignment of Long Chaulden access;
 - Alignment of primary road through the development, and inclusion of bus loop through local centre;
 - Allowance for variation in gas mains easement requirements in line with HSE criteria, and the provision of open space and ecological habitat within these areas;
 - Greater distribution of open space and SUDs features throughout the development, and ensuring these can also provide ecological enhancements;
 - Access to travellers site via Chaulden Lane;
 - New multi-functional linear park, incorporating biodiversity spaces, pedestrian and cycle routes, play provision and SUDs features.
- 4.3.8 The masterplan was updated further as a response to comments received from the February 2017 public exhibition event and the input of additional technical constraints information and requirements from key stakeholders, including DBC and HCC. It also benefitted from further detailed testing of the site, including capacity studies for development and infrastructure, such as drainage features, road alignment, cycle routes and footpaths. Adjustments were also made to the entrance from Long Chaulden to create a more formal sense of arrival into the development, with new wet and dry pond features providing ecological benefits and overlooked by a crescent of houses. The key changes delivered in this masterplan iteration included:
- Refined level of detail to the masterplan, sufficient to confirm full details for the first phase of the development;
 - New formal entrance space from Long Chaulden;
 - Updated local centre with extra care;
 - School site updated to allow for 1FE Primary School with option to expand to 2FE;
 - New community food growing within the development, including community gardens adjoining community hub, and community orchards to the south as part of the linear park;
 - Updated SUDs features throughout the green infrastructure, following more detailed testing, particularly for the first phase of development;
 - Updated access to travellers site, with pedestrian/ cycle access from within the development to improve connections to local facilities;
 - New foul water pumping station incorporated into the south-west parcel of the development;
 - Enhanced footpath and cycle connections from the development towards Shrubhill Common
 - Updated Community Hub layout.

- 4.3.9 The result was Figure 3.15 Illustrative masterplan, which forms part of the current planning application and upon which the ES parameter plans (Figures 3.1-3.5) are based. The detailed proposals for the first phase of development, as confirmed in Figure 3.6, are also based on the overall illustrative masterplan.