

6 Landscape character and visual amenity

6.1 Introduction

- 6.1.1 This chapter of the ES assesses the likely significant effects of the Proposed Development in terms of landscape and visual amenity. It also provides a summary of the Arboricultural Assessment undertaken for the proposed development, included as Appendix 2.2.
- 6.1.2 The chapter describes the assessment methodology, the baseline conditions at the site and surroundings, the likely significant landscape and visual effects, the mitigation measures required to prevent, reduce or offset any significant adverse effects and the likely residual effects after these measures have been employed. It has been prepared by an experienced Chartered Landscape Architect working for Savills using a methodology based on the Guidelines for Landscape and Visual Impact Assessment, Third Edition, by the Landscape Institute and Institute of Environmental Assessment and Management.
- 6.1.3 The assessment:
- Sets out the baseline information relating to the application site and its surroundings, including the landscape-related planning policy, guidance and designations, site context, landscape character and key features, important views and extent of visibility of the site.
 - Identifies potential landscape and visual receptors and combines judgements on the value attached to them and their susceptibility to change, to determine sensitivity.
 - Considers the magnitude of potential landscape and visual effects of the proposed development and the overall level and significance of these effects.
 - Indicates how landscape mitigation has been integrated into the proposals to address the potential adverse landscape and visual effects.
 - Describes any residual effects after mitigation has been established.
 - Considers cumulative effects.
- 6.1.4 The nature of the development assessed is as set out in Chapter 3 of this Environmental Statement and the associated parameter plans and more detailed application drawings for the first phase.
- 6.1.5 The study area for the purposes of the visual impact assessment focuses on the 'zone of visual influence', that is the area within which the proposed development would be most capable of being viewed. In this chapter, 'the Site' is used when referring to the application site for brevity.
- 6.1.6 Reference is made to potential lighting effects and mitigation measures at appropriate points in the chapter. It should be noted that a full lighting/night time visual impact assessment was scoped out of the ES in agreement with Dacorum Borough Council officers..

6.2 Planning policy and guidance

National planning context

6.2.1 The National Planning Policy Framework (NPPF), 2018, encourages good design in new development, and states that “good design is a key aspect of sustainable development, creates better places in which to live and work and helps make development acceptable to communities” (para 124).

6.2.2 Chapter 12 of the NPPF relates to achieving well-designed places. Paragraph 127 notes that planning policies and decisions should ensure that developments:

- “will function well and add to the overall quality of the area, not just for the short term but over the lifetime of the development;
- are visually attractive as a result of good architecture, layout and appropriate and effective landscaping;
- are sympathetic to local character and history, including the surrounding built environment and landscape setting, while not preventing or discouraging appropriate innovation or change (such as increased densities);
- establish or maintain a strong sense of place, using the arrangement of streets, spaces, building types and materials to create attractive, welcoming and distinctive places to live, work and visit;
- optimise the potential of the site to accommodate and sustain an appropriate amount and mix of development (including green and other public space) and support local facilities and transport networks; and
- create places that are safe, inclusive and accessible and which promote health and well-being, with a high standard of amenity for existing and future users⁴⁶; and where crime and disorder, and the fear of crime, do not undermine the quality of life or community cohesion and resilience.”

6.2.3 Good design should limit the impact of light pollution on local amenity, intrinsically dark skies and nature conservation. It also states that ‘*Great weight should be given to conserving landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty, which have the highest status of protection in relation to landscape and scenic beauty*’ (para172).

Local planning context

6.2.4 The following documents have been referred to in this section:

- Saved Policies of the Dacorum Local Plan 1991-2011(Adopted 2004)
- Dacorum Core Strategy 2006 -2031 (adopted March 2013)
- Local Allocation LA3 West Hemel Hempstead: Draft Masterplan (October 2015)
- Dacorum Borough Green Infrastructure Plan - Final Report. (Prepared for Dacorum Borough Council by Land Use Consultants March 2011)
- Dacorum Borough Council Open Space Study (2008)
- Environmental Guidelines Supplementary Planning Guidance (Dacorum Borough Council, May 2004)

6.2.5 The main strategic policies which will guide the development are set out in the Dacorum Core Strategy and the site is described as a Local Allocation LA3. The principle of development within this location has therefore been accepted.

6.2.6 Table 6.1 sets out relevant policies in the Dacorum Core Strategy and saved policies from the 2004 Local Plan. It also summarises relevant guidance in the Environmental Guidelines Supplementary Planning Guidance (2004).

Table 6.1: Landscape and Visual Policy and Guidance

Policy Reference	Policy Aspirations
Dacorum Core Strategy 2006-2031 (Adopted March 2013)	
POLICY CS10: Quality of Settlement Design	At the broad settlement level, development should: (a) respect defined countryside borders and the landscape character surrounding the town or village; (b) reinforce the topography of natural landscapes and the existing soft edges of towns and villages; (c) promote higher densities in and around town centres and local centres; (d) protect and enhance significant views into and out of towns and villages; (e) deliver landmark buildings at movement and pedestrian gateways and enhance focal points with high quality architecture; (f) preserve and enhance green gateways; and (g) protect and enhance wildlife corridors.
POLICY CS12: Quality of Site Design	On each site development should: d) retain important trees or replace them with suitable species if their loss is justified; e) plant trees and shrubs to help assimilate development and softly screen settlement edges; f) integrate with the streetscape character; and g) respect adjoining properties in terms of....landscaping and amenity space.
POLICY CS25: Landscape Character	All development will help conserve and enhance Dacorum's natural and historic landscape. Proposals will be assessed for their impact on landscape features to ensure that they conserve or improve the prevailing landscape quality, character and condition and take full account of the Dacorum Landscape Character Assessment, Historic Landscape Characterisation and advice contained within the Hertfordshire Historic Environment Record.
POLICY CS26: Green Infrastructure	The Green Infrastructure Network will be protected, extended and enhanced. Development and management action will contribute towards: - the conservation and restoration of habitats and species; - the strengthening of biodiversity corridors; - the creation of better public access and links through green space; and - a greater range of uses in urban green spaces. Open spaces will be managed in accordance with the Council's Green Space Strategy.
POLICY CS27: Quality of the Historic Environment	All development will favour the conservation of heritage assets. The integrity, setting and distinctiveness of designated and undesignated heritage assets will be protected, conserved and if appropriate enhanced. Development will positively conserve and enhance the appearance and character of conservation areas. ... Features of known or potential archaeological interest will be surveyed, recorded and wherever possible retained.
Local Allocation LA3	Relevant Landscape and Open Space Principles - The layout, design, density and landscaping must create a soft edge to the Green Belt and the extended open space. - Provision of new open space/ playing fields. - New strategic landscaping to mitigate the impact on the Bulbourne Valley. - Extend Shrubhill Common Nature Reserve and create wider green infrastructure links.

Policy Reference	Policy Aspirations
Dacorum Local Plan 1991-2011: Saved Policies	
POLICY 79 Footpath Network	The public footpath network will be protected, improved and promoted. Improvement of the footpath network could involve diversion and/or closure of limited stretches of path which are no longer needed: however in either case, the change should not inconvenience walkers or adversely affect residential amenities. Appropriate efforts will be made to reduce the amount of road walking necessary to link adjoining paths, and improve access to the countryside for the mobility impaired. Particular attention will be given to the creation and signing of circular walks including links with the Grand Union Canal towpath, town to country routes, permissive links, interpretative facilities, and to accessibility by passenger transport. Diversion of public footpaths as a result of development proposals will only be supported if the environmental character of the paths is maintained, walkers are not significantly inconvenienced and/or significant planning advantages accrue.
POLICY 100 Tree And Woodland Planting	Encouragement will be given to tree, woodland and hedge planting in appropriate locations, particularly as part of development landscaping schemes. All tree planting should, wherever possible, be with appropriate native broad-leaved species. The maintenance of approved development landscaping schemes will be carefully monitored and strictly enforced. Where necessary, tree preservation orders will be made on these schemes to ensure the retention of trees with potential visual importance that might be threatened by neglect or future development.
POLICY 101 Tree And Woodland Management	Appropriate management of trees standing as individual specimens, groups or woodlands or orchards and of hedgerows will be encouraged. For woodlands, management should include the identification of clear objectives for their use and should aim to resolve any conflicts arising from consideration of their value to nature conservation, landscape conservation, recreation and timber production interests. In areas of ancient semi-natural woodland, nature conservation will be afforded a high priority. For all other trees in both urban and rural locations, management should aim to maintain a healthy and safe tree population without causing an unreasonable nuisance or hazard to person, highway or property. High standards of professional tree care will be encouraged and promoted particularly by reference to British Standard 3998, "Recommendations for Tree Work", other relevant British Standards and the Borough Council's Tree Strategy.
Environmental Guidelines Supplementary Planning Guidance, May 2004	
3.1	The spaces around buildings are as important as the buildings themselves to the character and amenity of an area and should be designed to a high standard. This includes the retention and enhancement of existing trees and landscaping.
3.3	Elements of the existing and proposed landscape should be an integral part of layouts, especially for residential developments. Natural boundaries comprising hedgerows and trees should be retained, as should more scattered trees throughout a site wherever appropriate. Planning for the retention and protection of trees within new developments should follow the guidelines contained in British Standard 5837: 'Code of Practice for Trees in Relation to Construction'.
3.4	Applicants should consider the practicality of retaining trees at an early stage in formulating their development proposals. The following information should be provided and submitted on accurate, scaled plans to assist full evaluation: (a) an up-to-date site survey, showing trees greater than 75 mm stem diameter at 1.5 m above ground level, other features such as hedges and trees on adjacent land, and spot heights throughout the site; (b) trees to be retained or proposed to be removed, including an assessment of their physical condition and amenity value: the services of an arboricultural specialist may be needed in certain cases; and (c) the position of protective zones around each important tree or group of trees to be retained: the area to be protected will vary according to the proposed development and to the age, condition and species of tree.
3.5	A harmonious arrangement should be planned between the new development and trees. Account should be taken of trees' future growth and their likely effect on future occupiers.
3.8	Very few building developments can rely solely on the retention of existing trees to create an acceptable overall appearance. The existing vegetation, along with water features and even man made features such as old walls, helps to give the site a feeling of maturity, and links past and present. New planting is also necessary.
3.9	Planting schemes should generally use species of trees and shrubs which are similar to those occurring adjacent to the development site, to help buildings to blend in with their surroundings to help maintain and enhance local distinctiveness. Wherever possible, plant species should be native to the area and local provenance and/or important for native wildlife. There will be circumstances

Policy Reference	Policy Aspirations
	where more exotic species are appropriate, particularly in formal urban layouts where there are very substantial areas of hard surfacing and building.
4.11	A positive approach should be adopted to development in order to conserve or improve nature conservation interest. Even in circumstances where damage is unavoidable because of the pressure of other needs, the aim should be to limit that damage, and to create opportunities to redress it. It should be borne in mind that, if development is proposed adjoining a site of nature conservation interest, a buffer zone should be retained, as the area immediately surrounding such a site will also be valuable in supporting wildlife species, and providing part of their food supply. Reference is made in the guideline on Landscaping on Development Sites to the use of native species and the desirability of taking account of the needs of wildlife.
4.12	Retention of natural features, particularly ponds, trees, shrubs and hedgerows, where these can be blended in with the development, is vital for nature conservation
4.13	New landscaping should be in the form of group planting of native trees and shrubs rather than isolated trees. Hedges are preferred to fencing, and for example berry-bearing plants could be included to attract birds and nest boxes provided in appropriate locations. New ponds or wetland features could be created, perhaps as a more imaginative response to the needs of surface water drainage. Conservation of existing orchards or the planting of small new orchards – formerly a common feature of urban development – should be considered where possible.
4.14	The layout of the built elements of a scheme should avoid disruption of any wildlife linkages or corridors to adjoining sites, and planting should create continuity of species.
4.16	Where new roads cross important wildlife corridors, animal tunnels could be provided. New planting should add to the wildlife value of the area and reflect native species.

6.2.7 The Site Allocations DPD was submitted to the planning inspectorate for public examination in February 2016. This document includes a policy for the LA3 site, together with an indicative layout and series of development principles. These are reflected and elaborated on in the Draft Masterplan document. Where there is any conflict between these two documents, the Site Allocations DPD will take precedence.

6.2.8 The Local Allocation LA3 West Hemel Hempstead Draft Masterplan (Dacorum Borough Council, Taylor Wimpey, Barratt Homes, Vincent and Gorbing & Rapleys, October 2015) provides further detailed design guidance on how the site should be developed. This document has yet to be adopted. Guidance relevant to landscape and visual amenity is summarised in Table 6.2 below.

Table 6.2: Local Allocation LA3 West Hemel Hempstead Draft Masterplan (October 2014)

Policy Ref.	Policy Aspirations
Paragraph 4.3	"... there are key landscape features within the site that need to be protected in order to ensure that the development integrates well with its surroundings. These include substantial peripheral tree belts, hedgerows within the site and the undulating nature of the landform itself."
Paragraph 4.4	"In defining areas for development, close attention will need to be made to the relative prominence of different areas of the site when viewed from elsewhere, in particular views across Bulbourne Valley. This suggests reinforcing east/west open spaces and hedgerows in order to break down areas of roofscape into smaller discreet parcels. It also suggests that relative building heights will need to be carefully considered in order to maintain the treed skyline."
Paragraph 4.5	"To maximise integration with the existing urban area and encourage non-car access to local facilities, pedestrian and cycle links will be established where feasible at other locations where existing roads adjoin the boundary of the site. It is also important to promote effective linkages between key areas within the site."
Paragraph 4.7	"There are footpaths which already cross the site or route around its edges. These should be protected and enhanced, and linked into a wide network through and across the site. Pedestrian and cycle links can be provided from a number of adjacent estate roads to provide non-car access to local facilities. It should be noted that there is restricted public access through land immediately to the west of Pouchen End Lane. Access to new footpath and cycle routes would need to be via the existing rights of way."
Paragraphs 4.11 and 4.12	"The Master plan needs to achieve integration with the built up area by, for example, pedestrian and cycle links, views across the site and beyond to the countryside, and functional integration by the shared use of facilities. At the same time, the residential amenity of existing residents must be protected by good separation between existing and proposed dwellings, by landscaped margins to the new development..."
Paragraph 4.13	The development must be brought forward based on a full recognition of the varying facets of sustainable development and minimising carbon emissions. As set out in the NPPF and in the Core Strategy, there are numerous components to sustainable development. In relation to master planning, particular attention should be paid to: - Protecting and enhancing biodiversity in layout and design; - Using land use planning and design to improve health and well-being, such as encouraging exercise by easy access to open space, provision of allotments to encourage healthy eating, and ensuring well designed neighbourhoods that reduce crime and the fear of crime; - The importance of the Shrub Hill Common ecological corridors; and - Integration of new communities with existing ones, maximising connectivity to shops and Hemel Hempstead Railway Station.
Paragraph 4.14	"The development will follow best practice in urban design and the principles set out in Building for Life 12: " (Amongst other things, this publication seeks to: - create places with a locally inspired or otherwise distinctive character - ensure development works with the site and its context, including taking advantage of existing topography, landscape features (including water courses), trees and plants, wildlife habitats, existing buildings, site orientation and microclimate, - creates public and private spaces that are clearly defined and designed to have appropriate access and be able to be well managed and safe in use)
Paragraph 5.1	"Vision: The new neighbourhood of Pouchen End will be an attractive and distinct place. Its character will reflect the best design principles of the Chilterns area. While separate, the new neighbourhood will be integrated with other parts of the town through the use of shared services, facilities and open space.....Development will be spacious and will allow views of the countryside across the valley. Open space will permeate the neighbourhood, providing links between Shrubhill Common, the town and the wider countryside."
Paragraph 5.4	"Green Infrastructure: - Create a network of green infrastructure through the area by a 'green grid' of open spaces and movement corridors that link with opportunities for direct access to the countryside. - Establish a central swathe of open space across the land as a green link to Shrubhill Common with a wide tree belt which will assist in retaining a treed skyline when viewed from the south and south east. - Protect a wildlife corridor along the eastern side of the development adjoining Fields End. - Reinforce structural planting along existing field boundaries within the allocation to create a well-structured development of landscaped compartments with particular emphasis on enhancing existing screening and maintaining a treed skyline. - Retain an area of open space and associated structural landscaping on the more exposed south facing slopes.

Policy Ref.	Policy Aspirations
Paragraph 56	"The constraints and opportunities of the landscape of the site, and views into and from the development have been fundamental in defining the division between areas to be retained as open space, and areas to be developed."
Paragraph 5.4	"The Master Plan illustrates a comprehensive network of green spaces including areas of public open space, green corridors and landscaped buffers which in area will exceed Local Plan standards. This green grid would be multi-functional, including providing for informal recreation, biodiversity, areas of surface water attenuation, and visual amenity. The green grid then allows for the definition of a series of housing areas separated by existing and proposed landscape features, sub-dividing the site into livable (sic) neighbourhoods."
Paragraph 5.7	"...it is important to adopt a sound approach to the planning and management of the green spaces if they are to be of genuine ecological value. There should be a clear understanding of their leisure and wildlife roles and ongoing management, particularly in respect of the Shrubhill Common extension corridor which needs to be managed primarily for ecology. Any new development should maintain a sensitive relationship to the existing north-south green corridor, including maintaining an appropriate open buffer adjacent to the existing Green Lane. This would also need to be managed largely for ecology."
Paragraph 5.8	<p>"Meet Council standards for all types of open space as a basic aim.</p> <ul style="list-style-type: none"> - Design and manage the open space for clear, identifiable purposes. - Use open space to define different parts of the neighbourhood and help distinguish it from Chaulden. - Arrange the open space to ensure a pleasant, coherent and wildlife-friendly network throughout the neighbourhood. - Ensure that the layout and design of new sports provision is fit for purpose.
Paragraph 5.7	" The two main areas of open space comprise a central corridor across the site which acts as an extension to Shrubhill Common, and the southern swathe, embracing south facing slopes of the land and the alignment of the gas pipeline easement....The quantum of open land will ensure that the development is spacious and well integrated into the landscape."
Paragraph 5.18	"...the Master Plan identifies a number of discrete housing areas, separated by significant landscape features and areas of open space, all set within a peripheral necklace of structural planting. These areas have the potential to establish different character areas, with varying densities and detailed design approaches informed by their location within the development and environmental (particularly landscape) considerations."
Paragraph 5.42	<p>"Green Belt boundary and the Countryside:</p> <ul style="list-style-type: none"> - Reinforce the existing structural landscape features adjoining Pouchen End Lane to enable a new, clear and defensible Green Belt boundary to be defined, and to reduce further the limited views of the development from the west. - Soften views of housing from the countryside by use of tree planting, by retaining appropriate tree belts and by siting open space carefully (particularly in views from Little Heath and Westbrook Hay). - Provide a soft edge to the countryside and ensure visual and physical separation from Potten End and Winkwell. - Prevent further vehicular access onto rural lanes. - Provide pleasant footpath and cycle access through the site to link with Chiltern Way, Hertfordshire Way, the Grand Union Canal and the Chilterns AONB. - New strategic landscaping to mitigate the impact on the Bulbourne Valley. - Protect the amenities and character of Pouchen End hamlet. - Retain hedgerows and trees. - Use native species in planting schemes. - Maintain the rural character of Pouchen End Lane and Chaulden Lane.
Paragraph 5.42	The proposals shown in the Master Plan will result in a soft edge to the extended urban area. They will also offer the potential for a new, clear and defensible Green Belt boundary that will form the western limit of Hemel Hempstead. The Green Belt boundary suggested is along Pouchen End Lane; this will be established through the Site Allocations DPD.
Paragraph 5.43	The degree of visual containment of the land and the mitigation of landscape and visual impacts will clearly assist in avoiding harm to the wider Green Belt from either adverse impacts on visual amenity or 'unrestricted sprawl'. The Green Belt will continue to maintain the separate identities of Hemel Hempstead, Berkhamsted and the intervening villages. Existing public rights of way and the potential to create new access routes, will provide improved opportunities for access to the countryside from the urban area. There will be no impact on the special character areas within Hemel Hempstead, nor the historic areas within Berkhamsted, as there is no inter-visibility between these areas and the site.

6.3 Assessment methodology

Study Area

- 6.3.1 The baseline data collection and field study focussed on an area of 2km distance from the site, as this is generally the limit of where any housing would be sufficiently visible to have a significant adverse effect on visual amenity. The precise study area was decided following the production of a computer-generated Zone of Theoretical Visibility drawing, a site visit and in agreement with Dacorum Borough Council, via the Scoping Report.
- 6.3.2 Baseline data collection includes the use of OS maps, aerial photographs and topographic surveys, as well as observations from a field survey that included the site and the surrounding area.
- 6.3.3 The chapter also has been informed by the previous Landscape and Visual Impact Appraisal for the site entitled "*Land at West Hemel Hempstead, Hertfordshire (LA3) Landscape and Visual Issues Report*." This was prepared by David Williams Landscape Consultancy Ltd in 2012 on behalf of Barratt Homes North London, Taylor Wimpey UK Ltd and Hertfordshire County Council, to inform the LA3 Masterplan.
- 6.3.4 The designations relating to cultural heritage features have been considered in the chapter, only in terms of general potential for views from these features in the context of the character area within which they lie. Any other direct or indirect effects will be covered by Chapter 8 Archaeology and Heritage.
- 6.3.5 Areas designated for their ecological value are covered by Chapter 7 Ecology.

Published Methodology

- 6.3.6 The assessment methodology for assessing landscape and visual effects is principally based on the following best practice guidance:
- Guidelines for Landscape and Visual Impact Assessment – Third Edition (LI/IEMA, 2013)
 - Landscape Character Assessment – Guidance for England and Scotland (Swanick & LUC, 2002) produced on behalf of the Countryside Agency and Scottish Natural Heritage
 - Photography and photomontage in landscape and visual impact assessment (Landscape Institute Advice Note 01/11)
 - BS5837:2012 Trees in Relation to Design, Demolition and Construction (BSI, 2012)
- 6.3.7 The Guidelines for Landscape and Visual Impact Assessment (GLVIA) Third Edition, (Landscape Institute and the Institute of Environmental Management & Assessment, 2013) relies on an appreciation of the existing landscape and visual setting, a thorough understanding of the development proposals, evaluation of the magnitude of change predicted to result from the development, the sensitivity to change of the existing people with views and of the landscape, and the potential to mitigate impacts.
- 6.3.8 The assessment has two distinct elements, an assessment of effects on landscape features and character, and an assessment of visual amenity. The methodology for both uses a process based on identifying potential receptors that might be affected, appraising their existing 'value' and their capacity to accept the proposals to give an overall value for their 'sensitivity' and then combining this with an appraisal of the 'magnitude' of the effects.

- 6.3.9 The assessment methodology has been agreed with the Local Planning Authority and the appraisal of visual receptors was also developed through prior consultation with Dacorum Borough Council through the EIA Scoping process.
- 6.3.10 The nature of landscape and visual assessment requires both objective analysis and subjective professional judgement. Accordingly, the following assessment is based on the best practice guidance listed above, information and data analysis techniques. It uses subjective professional judgement and quantifiable factors wherever possible and is based on clearly defined terms.

Landscape Assessment Methodology

- 6.3.11 Landscape effects derive from changes in the physical landscape fabric which may contribute to changes in its character and how this is experienced. These effects need to be considered in line with changes already occurring within the landscape and which help define the character of it.
- 6.3.12 Effects upon the wider landscape resource, i.e. the landscape surrounding the development, requires an assessment of visibility of the proposals from adjacent landscape character areas, but remains an assessment of landscape character and not visual amenity.

METHOD FOR THE ASSESSMENT OF LANDSCAPE EFFECTS

- 6.3.13 The assessment of landscape effects considers changes occurring to individual elements or the fabric of the landscape, and how this alters its character. It takes into consideration changes which have already occurred, or are currently taking place in the landscape.
- 6.3.14 The landscape receptors include the following:
- The physical features of the landscape that contribute to its character, and which may be altered by development, for example:
 - Vegetation
 - Landform
 - Water features/ bodies
 - Access and circulation (with particular reference to routes valued for their scenic value, such as public rights of way and National Trails, including CROW Open Access Land)
 - Any designated features
 - The defined landscape character area within which the proposed development lies
 - Neighbouring character areas
- 6.3.15 The chapter includes descriptions and a drawing illustrating the relevant landscape character areas within the study area:
- National landscape character areas (Natural England)
 - Hertfordshire County Landscape Assessment
 - Dacorum Borough Landscape Assessment

NATURE OF LANDSCAPE RECEPTOR - 'SENSITIVITY'

- 6.3.16 A number of factors influence professional judgment when assessing the degree to which a particular landscape or visual receptor can accommodate change arising from a particular development. Sensitivity is made up of judgements regarding the 'value' attached to the receptor, which is determined at baseline stage, and the 'susceptibility' of the receptor, which is determined at the assessment stage when the nature of the proposals, and therefore the susceptibility of the landscape and visual resource to change, is better understood.
- 6.3.17 Susceptibility indicates *'the ability of a defined landscape or visual receptor to accommodate the specific proposed development without undue negative consequences'*¹. Susceptibility of visual receptors is primarily a function of the expectations and occupation or activity of the receptor. A degree of professional judgement applies in arriving at the susceptibility for both landscape and visual receptors and this is clearly set out in the technical annexes to this assessment.
- 6.3.18 A location may have different levels of sensitivity according to the types of visual receptors at that location and any one receptor type may be accorded different levels of sensitivity at different locations.
- 6.3.19 In this assessment, landscape value and receptor susceptibility are categorised as set out in Tables 6.3. and 6.4 below, and then considered in combination, as shown in Table 6.5.

Table 6.3: Landscape Receptor Sensitivity

Landscape Value	Criteria
High	A landscape element or area of high scenic/ perceptual qualities in good condition. Highly valued for its quality and/or landscape character, and may be designated at national or regional level, such as National Parks, Areas of Outstanding Natural Beauty, and Registered Parks and Gardens
Medium	A landscape element or area of medium scenic/ perceptual qualities, in at least moderate condition. Valued at a regional or district level, for example, through designation, such as Areas of Special Landscape Quality, or Conservation Areas. If local planning authorities do not make local designations for landscape, this category may still include undesignated landscapes with some of the following: <ul style="list-style-type: none"> - High scenic quality - Intact landscape character - Presence of rare elements/ features in the landscape - Features of particular landscape, wildlife, earth science or cultural heritage importance - Recreation value - Perceptual qualities such as wildness and/or tranquillity - Historical associations
Medium/ Low	An undesignated landscape that has some landscape features that contribute to its sense of place and may be of value to the local community, but that may be in mixed condition and include some detractors that weaken its overall character and scenic quality.
Low	A landscape element or area with few or no scenic/ perceptual qualities and in poor condition, not particularly valued, and not designated.

¹ Landscape Institute and Institute of Environmental Management and Assessment (2013) Guidelines for Landscape and Visual Impact Assessment, Third Edition Page 158.

Table 6.4: Landscape Susceptibility to Accept Change

Landscape Susceptibility to Change	Criteria
High	An area where landscape character would be noticeably changed by the proposed scheme, either due to the loss of important or distinctive landscape elements or features, or due to the introduction of new elements that are not typical of the area. The potential for intrusive development may also be due to a relatively open character, with few elements that could screen the proposed development. Overall, a landscape or element with low tolerance to change of the type proposed.
Medium	A landscape or element which is partially tolerant to change of the type proposed. This may be due to the presence of existing landscape detractors or the relative lack of a strong concentration of typical landscape characteristics. The capacity of the landscape to accept change may also be due to the presence of some elements that may screen the proposed scheme, such as vegetation, buildings or landform features.
Low	A landscape or element that is tolerant of substantial change of the type proposed. This may be due to a lack of existing distinctive landscape elements or characteristics, the presence of a number of landscape detractors or the presence of elements that may screen the proposed scheme.

Table 6.5: Landscape Receptor: Overall Sensitivity

Landscape Susceptibility to Change (from Table 6.4)	Value (from table 6.3)			
	High	Medium	Medium/ Low	Low
High	High	Medium	Medium/ Low	Low
Medium	Medium	Medium	Medium/ Low	Low
Low	Low	Low	Low	Low

NATURE AND LEVEL OF LANDSCAPE EFFECT - 'MAGNITUDE OF CHANGE'

6.3.20 The nature and level of the landscape effects, expressed as 'Magnitude of Change', have been evaluated by combining judgements about Size/Scale of effect (Table 6.6), Geographical Extent of effect (Table 6.7), and Duration of effect (Table 6.8). The proposed scheme is considered to be permanent, and therefore 'irreversible' development, albeit visual effects do change with time due to the growth of mitigation planting.

Table 6.6: Scale of Landscape Effect

Scale of Effect	Criteria
Major beneficial	The proposals have the potential to enhance or re-create numerous aspects of the quality and key characteristics of the landscape and/or townscape with new features characteristic of the local area and an improved visual amenity.
Moderate beneficial	The proposals have the potential to noticeably improve aspects of the quality and key characteristics of the landscape and/or townscape; and/or remove or restore damage caused by existing land uses or development.
Minor beneficial	The proposals have the potential to slightly improve the quality and key characteristics of the landscape and/or townscape; and/or enable some restoration of damage caused by existing land uses or development.
Negligible beneficial	The proposals would create a just discernible improvement to the quality and key characteristics of the landscape and/or townscape.
Neutral	The proposals may not be uncharacteristic of the existing landscape; may complement the scale, landform and pattern of the landscape and/or townscape; or may maintain existing aspects of the quality and character of the landscape or townscape. The proposals incorporate measures for mitigation to ensure that the scheme will blend in well with surrounding landscape/townscape features and elements.
No change	The landscape/townscape would not be altered by the proposals.
Negligible adverse	The proposals would create a just discernible loss, or alteration to the key characteristics of the existing landscape. Addition of elements not uncharacteristic within the existing landscape.
Minor Adverse	The proposals would not quite fit with the key characteristics of the existing landscape, and/or there would be minor loss of or alteration of landscape elements, features or characteristics. Addition of elements that may not be uncharacteristic within the existing landscape.
Moderate adverse	The proposals would noticeably be at odds with the key characteristics of the existing landscape, would noticeably change the condition or character of the landscape, and/or would result in the partial loss or alteration to one or more key landscape elements, features or characteristics. Addition of elements that are prominent and may conflict with the key characteristics of the existing landscape.
Major adverse	The proposals would be at total variance with the key characteristics of the existing landscape/townscape; and/or there would be a very noticeable loss or change in landscape elements, features or characteristics. Addition of elements which strongly conflict with the key characteristics of the existing landscape and/or cause a very high quality landscape to be permanently changed and its quality diminished.

Table 6.7: Geographical Extent of Landscape Effect Criteria

Extent	Criteria
Larger Scale	Effects on landscape characteristics or elements influence a wide area, and may cover several landscape character areas.
Medium Scale	Effects on landscape characteristics or elements occur within the scale of the local landscape character area(s) of the site, or over a less extensive area than these are defined.
Site setting	Effects on landscape characteristics or elements occur within the site and its immediate setting only.
Site level	Effects on landscape characteristics or elements are localised, occurring only within the site, or parts of it.

Table 6.8: Duration of Effect Criteria

Duration	Criteria
Long term	More than 15 years
Medium term	5 to 15 years
Short term	1 to 5 years
Temporary	Less than 12 months

Table 6.9: Overall Magnitude of Landscape Effects

Magnitude	Criteria
High adverse/ beneficial	Effects of major scale/ size affecting larger, medium or site setting geographical extent over the long or medium term.
Medium adverse/ beneficial	Effects of major scale/ size affecting site level geographical extent over the long or medium term, or Effects of major size/ scale affecting larger, medium, site setting or site level geographical extent over the short term, or Effects of moderate scale/ size affecting larger, medium, site setting or site level geographical extent and over the long or medium term.
Low adverse/ beneficial	Effects of moderate scale/ size affecting larger, medium, site setting or site level geographical extent and over the short term. Effects of minor scale/ size affecting the larger, medium, site setting or site level scale over the long or medium term.
Negligible adverse/ beneficial	Effects of minor scale/ size affecting the larger, medium, site setting or site level scale over the short term. Effects of negligible scale/ size affecting the larger, medium, site setting or site level geographical extent and over the long/ medium or short term.

LEVEL AND SIGNIFICANCE OF LANDSCAPE EFFECTS

6.3.21 The 'Level of the Landscape Effects' is derived by combining the judgements about the overall sensitivity of the landscape receptor (from Table 6.5) and the magnitude of change (from Table 6.9), as shown in Table 6.10 below. For the purposes of this assessment, impacts of 'moderate' and above are considered to be 'significant'.

Table 6.10: Overall Level of Landscape and Visual Effects

Sensitivity of receptor	Magnitude of change				
	High Adverse/ Beneficial	Medium Adverse/ Beneficial	Low Adverse/ Beneficial	Negligible Adverse/ Beneficial	Neutral
Very high	Substantial	Major	Moderate	Minor	Neutral
High	Major	Moderate	Minor	Negligible	Neutral
Medium	Moderate	Moderate	Minor	Negligible	Neutral
Low	Minor	Minor	Minor	Negligible	Neutral

Visual Assessment

6.3.22 The assessment of effects on visual amenity draws on the predicted effects of the development, the landscape and visual context, and the visibility and viewpoint analysis, and considers the significance of the overall effects of the proposed development on the visual amenity of the main visual receptor types in the study area.

6.3.23 The chapter highlights potential visual receptors and key views which may be affected by the proposals and considers the significance of the overall effects on them. These were informed by the production of a computer-generated 'Zone of Theoretical Visibility' and the site visit.

6.3.24 The locations and types of visual receptors within the defined study areas are identified from Ordnance Survey (OS) maps and other published information (such as walking guides), from fieldwork observations and from local knowledge provided during the consultation process. Examples of visual receptors may include, but not be limited to, the following:

- Settlements and private residences.
- Users of National Cycle Routes and National Trails.

- Users of local/regional cycle and walking routes.
- Those using local rights of way – walkers, horse riders, cyclists.
- Users of open spaces with public access.
- People using major (Motorways, A and B) roads.
- People using minor roads.
- People using railways.

6.3.25 Viewpoints were limited to those areas considered to have views towards the site and to which the public has access. These were selected to be representative of typical views from the site from roads or rights of way. It also involved visiting the nearest publicly accessible location by buildings or private properties around the site, to confirm the extent of visibility of the site and to further appraise the landscape features of the site and surrounding area. Photographs towards the site were taken using a full frame digital camera (Canon EOS 5D, fitted with a lens set to 50mm). At each viewpoint, a number of these photographs have then been merged to form panoramas, to give a better idea of the wider context. The assumed eye height used in the visual appraisal is 1.5m above ground level.

6.3.26 Illustrative photomontages have been prepared for two of the viewpoints, Viewpoint 18 (from Westbrook Hay) and Viewpoint 20 (from Felden Lane) at the request of Dacorum Borough Council planning officers. These have been based on the construction of computer-generated model using indicative housing blocks of 9m height (representing 2.5 storeys), together with 11m high blocks (representing 3 storeys) around the local centre. These were placed on the existing site terrain within Google Earth and then rendered with building and roof elevations and vegetation taken from similar building typologies within the adjacent areas of Hemel Hempstead to obtain a similar effect in terms of lighting texture. Given that much of the site is subject to an outline application only, the photomontages cannot therefore provide an accurate indication of the building elevations, locations and massing that will ultimately be built on the site, but instead aim to show what the worst case could be.

SENSITIVITY OF VISUAL RECEPTOR

6.3.27 For there to be a visual effect there is the need of a viewer (receptor). Receptors are those people within or using residential properties, work places, roads, railways and footpaths and recreational facilities used by the public that would be likely to experience a change in their existing views as a result of the construction and operation of the proposed development.

6.3.28 The nature of the visual receptor, expressed as 'Visual Receptor Sensitivity', has been evaluated by combining judgements about Values attached to views and Susceptibility to Change of the type proposed. These assessments have been informed by the findings from the site visit and where appropriate, published documents. In this assessment, visual receptor value and susceptibility are ranked as set out in Tables 6.11 and 6.12 below. These two elements are then considered together, as shown in Table 6.13.

Table 6.11: Value of Visual Receptor

Value	Criteria
Very high	Views with high scenic value, views to heritage assets or valued landscape features. Recognition of value shown through planning designations or in relation to heritage assets. Views may be referenced in tourist guides or maps and accompanied by facilities to facilitate their enjoyment, such as parking or interpretation boards. Includes national trails and nationally designated countryside/ landscape features with public access which people might visit purely to experience the view; and visitors to heritage assets of national importance.
High	View of clear value but may not be formally recognised e.g. framed view of high scenic value, or destination hill summits. It may also be inferred that the view is likely to have value e.g. to local residents. Includes local public rights of way, access land and National Trust land plus roads within nationally important landscapes (e.g. AONBs or National Parks).
Medium	Views of medium scenic value. Views not necessarily promoted widely for their value, but may be appreciated by the local community as a popular place to walk/visit.
Low	Views are of lesser value for example, due to landscape detractors or a high level of screening, and/or may only be experienced for periods of shorter duration, such as from roads or railways.

Table 6.12: Susceptibility of Visual Receptor to Change

Value	Criteria
High	Residents at home. People engaged in outdoor recreation whose attention is likely to be focused on the landscape and particular views. Visitors to heritage assets or other attractions where views are an important contributor to the experience. Communities where views contribute to the landscape setting enjoyed by residents.
Medium	Travellers on road, rail or other transport routes, where travel involves recognised scenic routes. Users of roads or lanes for recreational uses (e.g. walking, horse riding, cycling etc). Users of recreational facilities such as golf courses or parks, where the views contribute to the enjoyment of the facility. People at their place of work where views are an important contributor to the setting and quality of working life.
Low	Vehicle users on roads used principally for passage, where the attention is not necessarily focused on the view. People engaged in outdoor sport or recreation which does not involve or depend upon appreciation of views of the landscape.

Table 6.13: Overall Visual Receptor Sensitivity

Susceptibility to change (Table 6.12)	Value (from Table 6.11)			
	Very High	High	Medium	Low
High	Very high	High	Medium	Low
Medium	High	Medium	Medium	Low
Low	Medium	Medium	Low	Low

MAGNITUDE OF VISUAL CHANGE

6.3.29 Similar to the assessment of landscape effects, the nature of the visual effects, expressed as 'magnitude of visual change', has been evaluated by combining judgements about:

- Size/ Scale of effect (Table 6.14).
- Geographical Extent of effect (Table 6.15).
- Duration of effect (Table 6.8).

6.3.30 Table 6.16 combines these to provide the overall 'magnitude of change'. The proposed development is considered to be permanent, and therefore 'Irreversible', albeit visual effects do change with time due to the growth of mitigation planting.

Table 6.14: Size/scale of Visual Effect

Size/scale	Very High
Major Beneficial	Where the development would cause a dominating improvement to the existing view, markedly improving the overall scene, for example through major mitigation or enhancement measures, and/or the removal of a number of notable detracting features from the view.
Moderate Beneficial	Where the development would cause a clearly noticeable improvement in the existing view, moderately improving the overall scene, for example through mitigation or enhancement measures, or the removal of one or more notable detracting features from the view.
Minor beneficial	Where the development would cause a perceptible improvement in the existing view, and slightly improving the overall scene, for example through mitigation or enhancement measures or removal of detracting features from the view.
Negligible beneficial	Where the development would cause a barely perceptible improvement in the existing view.
Neutral	Where the development would cause a change to the view, but would be in keeping with the existing elements of the view, thus having neither an adverse or beneficial effect.
No Change	The development would not alter the existing view.
Negligible adverse	Where the development would cause a barely perceptible change in the existing view due to either the presence of screening elements or distance from the viewer. While the development or a part of it may be visible, it would not result in change to the overall composition of the view, or landscape character of the area.
Minor adverse	Where the development would cause a perceptible change in the existing view, but would not materially affect its composition, or the appreciation of landscape character, either due to its distance from the viewer, the presence of screening elements or complementary design, colours and textures. Views of the proposals are more likely to be glimpsed or partial than full.
Moderate adverse	Where the development would cause a clearly noticeable change in the existing view, which would have some effects on its composition, and/or the appreciation of landscape character. It would not result in a dominant change to the view however, and the overall effect is likely to be mitigated due to distance from the viewer, complementary design, colours or textures, or the presence of some screening elements.
Major adverse	Where the development would cause a dominant or complete change to the composition of the view, and the appreciation of landscape character, contrasting in terms of form, scale and mass, height, colour and/or texture. Views of the scheme are unlikely to be screened to any extent.

Table 6.15: Geographical Extents of Visual Effect

Size/scale	Very High
Wide extents	Direct views, or oblique views, at close range and resulting in change to the view over a noticeable horizontal and/or vertical extent. Views of the development may be either full or partial.
Medium extents	Direct or indirect views, or oblique views, up to medium distance and resulting in change to the view over a moderate horizontal and/or vertical extent. Views of the development may be either full or partial.
Limited extents	Very oblique views, or views from medium to long distance, and resulting in change to the view over a small horizontal and/or vertical extent. Views of the development may be full, partial or glimpsed.
Negligible	Views from long distance, and/or resulting in a barely perceptible change to the view.

Table 6.16: Overall Magnitude of Visual Effects

Magnitude	Criteria
High adverse/ beneficial	Effects of major scale/ size affecting all geographical extents over the long or medium term.
Medium adverse/ beneficial	Effects of major scale/ size affecting all geographical extents over the short term, or Effects of moderate scale/ size affecting all geographical extents over the long or medium term.
Low adverse/ beneficial	Effects of moderate scale/ size affecting all geographical extents over the short term, or Effects of minor scale/ size affecting all geographical extents over the long or medium term.
Negligible adverse/ beneficial	Effects of minor scale/ size affecting all geographical extents over the short term. Effects of negligible scale/ size affecting all geographical extents over the long/ medium or short term.

OVERALL LEVEL OF VISUAL EFFECTS

6.3.31 The Overall Level of the Visual Effects is judged by combining the assessments of the Overall Sensitivity of the visual receptor and the Magnitude of Change. This uses the same matrix as provided for the assessment of landscape effects, as shown in Table 6.10. For the purposes of this assessment, impacts of 'moderate' and above are considered to be 'significant'.

Cumulative Effects

6.3.32 Cumulative effects generally occur where there may be combined or sequential visibility of two or more developments of the same type and scale, or where the consideration of other schemes would increase an effect identified. Where other similar schemes are in the planning system and made known to the applicant, or are under construction, these are considered in conjunction with the proposed scheme. The cumulative effects of this development are considered within this ES Chapter relative to landscape and Visual Impact issues.

6.3.33 Effects are judged to be:

- Incremental effect. These relate to small changes over time by numerous developments potentially giving rise to significant impact.
- Accumulative effects. These relate to multiple effects from a single development, which may give rise to a potentially significant impact upon a receptor.
- Cumulative effects. These relate to multiple developments giving rise to significant effects at a receptor.

6.3.34 The assessment of cumulative visual effects also takes into consideration how one or more developments together may affect visual amenity, as set out in Table 6.17.

Table 6.17: Types of Cumulative Visual Effect

Generic	Specific	Characteristics
Combined (where the observer is able to see two or more developments from one viewpoint)	In combination	Where two or more developments would be within the observer's arc of vision at the same time without moving his/her head.
	In succession	Where the observer has to turn his/her head to see the various developments - actual and visualised.
Sequential (where the observer has to move to another viewpoint to see the same or different developments. Sequential effects may be assessed for travel along regularly used roads or paths.)	Frequently sequential	Where the features appear regularly and with short time lapses between instances depending on the speed of travel and distance between the viewpoints.
	Occasionally sequential	Where longer time lapses between appearances would occur because the observer is moving very slowly and/or there are larger distances between the viewpoints.

(Source: Guidelines for Landscape and Visual Impact Assessment, Third Edition, Landscape Institute and Institute of Environmental Assessment and Management, 2013)

Field Surveys

6.3.35 A number of field assessments of local site circumstances, including photographic survey of the character and visual context of the development site and its surroundings, and an assessment of Rights of Way, have been undertaken in March 2016 in order to gather robust baseline information. Field assessments were undertaken in winter conditions (ie prior to leaf emergence) and have, therefore, been undertaken, as far as is practicable, in accordance with best practice guidance which states that such assessments should be undertaken when the leaves are absent from the majority of trees/vegetation and visibility is at its greatest.

6.3.36 These field based assessments were only undertaken by a Chartered Landscape Architect.

Limitations and Assumptions

6.3.37 The assessment of potential impacts is based on the proposals set out in the parameter plans and the more detailed drawing for approval for the first phase area. The assessment of residual impacts is based on the incorporation of additional mitigation measures as set out in Figure 3.9 Illustrative Green Infrastructure Strategy, and the submitted Design and Access Statement.

6.3.38 The site visit did not include access to any private property other than the site itself and from public rights of way across private land.

6.3.39 Baseline conditions have been established using existing assessments, available documentation and field assessment; it is important to note that this information may change before or during the construction and operation of the proposed development.

6.3.40 Within reasonable limits, the assessment is undertaken in consideration of the 'worst case' scenario for the development, i.e. those potential outcomes, situations or locations which would result in the most profound effect on landscape and visual receptors. It therefore identifies the greatest degree of change likely to accrue, and may be subject to mitigating factors or alternative conditions which might reduce those effects. For example, visual effects are considered in both summer and winter context; although the magnitude of effect is expressed for winter landscape conditions when trees are bare of leaf cover and the visibility of development is at its greatest. Where this is the case, the assessment identifies alternative conditions or further mitigation which might result in impacts being less pronounced.

- 6.3.41 The assessment applies a pre-determined methodology to arrive at conclusions as set out above. This procedure brings a degree of objective, procedural rigour into what otherwise might be judged to be 'personal opinion'. Certainly, professional judgement still plays its part, but the purpose of adopting a methodology is to make the process as clear and logical as possible.

Consultations

- 6.3.42 Consultation with the Local Planning Authority consisted of discussions with Dacorum Borough Council's Trees and Woodlands Officer and Matt Heron, Planning Officer with regards to preferred viewpoints. The Trees and Woodland Officer requested that the viewpoints that had previously been visited by the David Williams Landscape Consultancy Ltd as part of their 2012 Landscape and Visual Impact Appraisal of the LA3 site should be assessed. Further to that, Matt Heron requested that two illustrative photomontages be prepared from the hillside to the south of the site.
- 6.3.43 Savills also consulted Nigel Gibbs, Planning Officer at Dacorum Borough Council in relation to Lighting assessment requirements. From these discussions it was understood that the approach and potential implications of the lighting should be described within the LVIA, but it was agreed that a separate Lighting Impact Assessment would not be required.
- 6.3.44 During the EIA scoping process, the Local Planning Authority was consulted on the methodology and associated terminology for undertaking the Landscape Visual Impact Assessment. This correspondence included the best practice by which Savills prepares all its assessments against; the Local Planning Authority did not raise any comment or concern.

6.4 Baseline conditions

Landscape and Visual Designations

- 6.4.1 Designations that relate to landscape and visual amenity are shown on Figure 6.1.
- 6.4.2 The site does not lie within an area designated for its scenic quality and does not form part of the Green Belt.
- 6.4.3 The Chilterns Area of Outstanding Natural Beauty lies approximately 0.8km to the west of the site. The value for this area is judged to be 'very high' given that it is a national designation. With regards to its 'susceptibility to change', the site visit and computer generated 'Zone of Theoretical Visibility' (Figure 6.6) has shown that there are no key views of the site from within the AONB, due to the topography and screening effects of mature hedgerow boundaries along both sides of Pouchen End Lane to the west of the site. The site is however seen in conjunction with an extremely small part of the AONB when viewed from limited areas to the south, including parts of Sheethanger Common and the Little Hay Golf Complex and Hertfordshire Way. In these views, the AONB is scarcely appreciated. Potential effects on this setting of the AONB were covered at the 1998 Dacorum Borough Council Local Plan Review. The Local Plan Inspector considered the site during a Public Local Inquiry held between March 2000 and May 2001 and reported his findings in September 2002. At that time, the Inspector made the following comment (paragraph 7.33.22):

"I have noted the suggestion of some objectors that since both the land at West Hemel Hempstead and land within the Chilterns AONB can be seen from Sheethanger Common the development of the former would have harmful effect on the latter. However I am not persuaded

that development of the land at West Hemel Hempstead would have a damaging impact on either the AONB or its setting, owing to the distance between them."

- 6.4.4 For this reason, whilst the AONB is judged to be of 'high' value, its 'susceptibility to change' is low, given the lack of visual connectivity the site has with it. Overall, this gives it a '**low**' sensitivity.
- 6.4.5 There is one Tree Preservation Order affecting the site, TPO 453 which covers vegetation adjacent to 'Footpath 20 North off Long Chaulden'. This preservation order is described as covering "W1 Hornbeam, Field Maple, Holly, Ash, Hawthorn, Hazel 17 Mature Oaks plotted". As such no trees can be cut down, topped, lopped or uprooted without consent.
- 6.4.6 The site contains no designated heritage assets. The wider study area contains relatively few heritage assets which could experience an impact on their setting. Whilst Pouchen End Hall and Winkwell are the closest listed buildings at 0.1km from the site, the site is screened by intervening vegetation and built form/ structures. The only listed buildings with some (limited) intervisibility with the site are Moorend Farmhouse and Hay Lodge, both of which are situated on the southern side of the A4251, approximately 0.5km to the south of the site. None of the three Conservation Areas or three Scheduled Ancient Monuments within the study area have intervisibility with the site. The setting of heritage assets is covered in Chapter 8 Archaeology and Heritage.

Landscape Character

- 6.4.7 There are a number of Landscape Character Assessments relating to the area. The national level of landscape character assessment is described by Natural England (2014). County level landscape assessment and guidance is covered by the Hertfordshire Landscape Character Assessment (2012). More detailed local landscape and townscape assessment is described in the Dacorum Landscape Character Assessment (2004). An overview of the key characteristics, forces for change and guidance relevant to the proposed development site are set out below, while the character areas are illustrated on Figure 6.2.

NATIONAL LANDSCAPE CHARACTER ASSESSMENT

- 6.4.8 Natural England's National Character Map shows that the site and land surrounding the site lies within National Character Area (NCA) 110 Chilterns. The Study Area and surrounding landscape, to the west of Hemel Hempstead, is identified lying within the Chilterns Character Area No 110. This landscape character area covers an extensive area stretching from the River Thames in Oxfordshire, across Buckinghamshire and Hertfordshire to Bedfordshire. The site lies within the centre of the character area.
- 6.4.9 Many of the key characteristics listed in the NCA profile are not relevant to the site, however the following are:
- *The chalk plateau is incised by parallel branching valleys gently shelving to the south-east into the London Basin. The large chalk aquifer is abstracted for water to supply London and its surrounds and also supports flows of springs, chalk streams and the River Thames.*
 - *There are several chalk streams. Features associated with a history of modification include historic mills, watercress beds, culverts and habitat enhancements.*
 - *A mixture of arable, grassland and woodland and the numerous commons reflects the dominance of Grade 3 agricultural land.*

- *Major transport routes, including motorways, radiate from adjacent Greater London, associated with significant 20th-century development and extensive urban fringe areas.*
- *Extensive rights of way, commons, open access downland, woodland and some parklands provide access to the countryside. The Thames Path, the Ridgeway and the Grand Union Canal are high-profile recreation routes; locally promoted routes include the Chilterns Cycleway. Private leisure land uses, including golf courses and horse paddocks, are common near urban centres.*

6.4.10 Relevant Statements of Environmental Opportunity are:

- *SEO 3: Conserve the Chilterns' groundwater resource, River Thames and chalk streams by working in partnership to tackle inter-related issues at a catchment scale and also across the water supply network area. Seek to secure, now and in the future, sustainable water use and thriving flood plain landscapes that are valued by the public.*
- *SEO 4: Enhance local distinctiveness and create or enhance green infrastructure within existing settlements and through new development, particularly in relation to the urban fringe and growth areas ...Ensure that communities can enjoy good access to the countryside.*

6.4.11 In general, the site is not characteristic of the wider character area, being dominated by its urban fringe landscape rather than wooded escarpments more typical of the majority of the Chilterns. Its value is therefore judged to be of 'medium' sensitivity, being an undesignated part with urban detractors, but set within a wider area with recognised landscape qualities. Given that the site has relatively few key characteristics of the Chilterns Character Area and no intervisibility with the Chilterns AONB and is relatively well-contained in views from the north, west and east, the susceptibility of this part of the character area to change is 'low'. Overall, it is therefore judged to be of '**low**' sensitivity.

DACORUM LANDSCAPE CHARACTER ASSESSMENT

6.4.12 In May 2004, the Landscape Character Assessment for Dacorum was published as Supplementary Planning Guidance (SPG). The site is covered by two Landscape Character Areas (LCAs), the southern part of the site lies within Area 118 - Lower Bulbourne Valley, whilst its northern area lies within Area 120 - Little Heath Uplands (See Figure 6.2).

LOWER BULBOURNE VALLEY - A LANDSCAPE CHARACTER AREA

6.4.13 The 'Lower Bulbourne Valley' LCA is described as occupying:

"a relatively steep sided valley, strongly influenced by the major settlements of Hemel Hempstead and Berkhamsted at either end, which spread up the slopes and onto the adjacent plateau. The narrow congested valley floor combines areas of wet meadow with important corridors for canal, road and rail. At its eastern end the area flows into Hemel Hempstead at Boxmoor where the meadows create a relaxed rural approach to the town. On the valley slopes open large scale arable farming is characteristic while elsewhere there are distinctive chalk landscapes associated with Roughdown and Sheethanger Commons."

6.4.14 Relevant key characteristics described in the Assessment are:

- *Narrow valley floor dominated by arterial transport routes including the London to Glasgow West Coast Main Line, Grand Union Canal and the A41*
- *Steeply sloping valley sides with views to major settlements and associated 'landmark' buildings*
- *Wetland meadows and pollarded willows associated with River Bulbourne*

- *Canal basins, locks, barges, bridges and architecture*
- *Influence of the Boxmoor Trust at Boxmoor Common, Roughdown Common and Sheethanger Common.*
- *Large arable fields and few hedgerows to valley slopes*
- *Minor roads running up the valley slopes in sunken lanes with hedgebanks*

6.4.15 With regards to 'Visual and Sensory Perception' within the area, the assessment considers that:

"The area is generally contained from view, apart from on the adjacent plateau edges. There is a curious mix where open, large scale arable fields on the valley sides sit alongside extensive areas of residential development punctuated by high rise buildings within the built up areas. There are some fine views across the valley although a number are urban in character. The arterial character of the valley is the unifying feature with the main line railway, canal and A41 all occupying the valley floor. This creates a busy and noisy atmosphere which is only partially subdued by the Boxmoor Trust meadows and the canal side environments."

6.4.16 The Condition of the landscape is judged by the Landscape Assessment as follows:

- *Land cover change:* *localised*
- *Age structure of tree cover:* *mixed*
- *Extent of semi-natural habitat survival:* *scattered*
- *Management of semi-natural habitat:* *good*
- *Survival of cultural pattern:* *declining*
- *Impact of built development:* *high*
- *Impact of land-use change:* *moderate*
- *Overall Condition:* *MODERATE*

6.4.17 The strength of character of the area is judged by the Landscape Assessment as follows:

- *Impact of landform:* *prominent*
- *Impact of land cover:* *apparent*
- *Impact of historic pattern:* *apparent*
- *Visibility from outside:* *locally visible*
- *Sense of enclosure:* *partial*
- *Visual unity:* *incoherent*
- *Distinctiveness/rarity:* *frequent*
- *Overall Strength of character:* *MODERATE*

6.4.18 The evaluation of the condition and strength of character matrix within the Landscape Character Assessment indicates that the Lower Bulbourne Valley landscape strategy, and guidelines for managing change, is "Improve and Conserve". Of the 15 bullet points setting out the strategy, six are relevant to the Study Area and development proposals. These are:

- *"Promote awareness and consideration of the setting of the AONB, and views to and from it, when considering development and land use change proposals on sites adjacent to the AONB;*
- *Develop a strategy to limit built development within the area and mitigate the impact of existing development either within or adjacent to the area on the edges of Berkhamsted*

and Hemel Hempstead;

- *Encourage the retention of the existing pattern of hedges and to create new features of arable landscapes to the valley sides. Use the line of old field boundaries and/or rights of way where possible;*
- *Promote the creation of buffer zones between intensive arable production and important semi-natural habitats;*
- *Promote the retention of the character of local minor roads by the management of hedgerows and sunken lanes up the valley sides;*
- *Where part of a hedge has been damaged or removed it should be replanted with a mix of indigenous species; and,*
- *Ensure that local highway improvements are sympathetic to the scale, pattern and character of the existing road network."*

6.4.19 Given that both the condition and strength of character of the area is judged by the assessment to be 'moderate' and that is influenced both by the urban edge of Hemel Hempstead and transport corridors along the valley floor, the overall value of the area is judged to be 'medium'. Its susceptibility to change is also judged to be 'medium', reflecting its relatively restricted visibility and existing detractors. Overall, this gives it a **'medium'** sensitivity.

LITTLE HEATH UPLANDS LANDSCAPE CHARACTER AREA

6.4.20 The Little Heath Uplands Landscape Character Area is described as being:

"influenced by the residential fringes of Hemel Hempstead, creating an urban edge quality to the plateau. The land is predominantly farmed for arable crops with horse paddocks clustered around the farms and houses. The upland gently undulates and the irregular and sub regular field patterns are Intermittently visible. The effect of the landscape management on the character of this area contrasts with the neighbouring Ashridge Estate to the west. For example there is evidence of the loss of field boundaries as fields have increased in size for the intensification of agricultural on the plateau. Little Heath to the south of Potten End is a remote part of the Ashridge Estate. Here the character becomes more intimate with narrow country lanes and wooded dells."

6.4.21 Relevant key characteristics are:

- *Urban fringe influence*
- *Arable farming*
- *Isolated farms and pasture fields*
- *Contained views*

6.4.22 With regards to 'Visual and Sensory Perception', the Character Assessment states that:

"The area is only locally visible from outside due to its plateau location and being concealed by the woodlands of Ashridge and the commons / secondary woodland at Little Heath. The village of Potten End provides further enclosure. The village green and Martin's Pond provide an attractive focus to the area while Little Heath has a locally confined character."

6.4.23 The Condition of the landscape is judged by the Landscape Assessment as follows:

- *Land cover change:* *localised*
- *Age structure of tree cover:* *mature*
- *Extent of semi-natural habitat survival:* *scattered*
- *Management of semi-natural habitat:* *good*

- *Survival of cultural pattern:* *interrupted*
- *Impact of built development:* *moderate*
- *Impact of land-use change:* *low*
- *Overall Condition:* *MODERATE*

6.4.24 The strength of character of the area is judged by the Landscape Assessment as follows:

- *Impact of landform:* *insignificant*
- *Impact of land cover:* *apparent*
- *Impact of historic pattern:* *apparent*
- *Visibility from outside:* *locally visible*
- *Sense of enclosure:* *partial*
- *Visual unity:* *incoherent*
- *Distinctiveness/rarity:* *frequent*
- *Overall Strength of character:* *MODERATE*

6.4.25 The evaluation of the condition and strength of character matrix indicates that the Little Heath Uplands landscape strategy, and guidelines for managing change, is “Improve and Conserve”. Of the 19 bullet points setting out the strategy, 12 are relevant to the Study Area and development proposals. These are:

- *“Utilise ancient hedge and field boundaries for the most appropriate location for woodland restoration and expansion;*
- *Promote the creation of buffer zones between intensive arable production and important semi-natural habitats and the creation of links between semi-natural habitats;*
- *Promote hedgerow restoration and creation throughout the areas to provide visual and ecological links between existing and proposed woodland areas. Pattern to follow historic field boundaries where possible. Restoration measures to include; coppicing, laying, replanting and gapping up;*
- *Where hedgerow removal is deemed to be unavoidable, replacement planting should use locally native species of local provenance to maintain local distinctiveness;*
- *Conserve and enhance the distinctive character of traditional settlements and individual buildings by promoting the conservation of important buildings and high standards of new building or alterations to existing properties, all with the consistent use of locally traditional materials and designed to reflect the traditional character of the area;*
- *Maintain and develop the traditional pattern of roadside verges as a local feature and a wildlife resource. Where development is likely to affect verges and damage is unavoidable, development should include details of protection of the remaining verge and replacement of its nature conversation value within the proposed scheme;*
- *The planting and pollarding of trees adjacent to highways should be encouraged;*
- *Promote awareness and consideration of the setting of the AONB, and views to and from it, when considering development and land use to change proposals on sites adjacent to the AONB;*
- *A co-ordinated approach to the provision of access and recreation opportunities, car parking, land management, site interpretation etc should be encouraged between neighbouring communities.*

- *Support a strategy to limit built development within area and visual impact of development that may affect the area from outside, including Hemel Hempstead.*

- 6.4.26 Given that both the condition and strength of character of the area is judged by the assessment to be 'moderate' and that it is influenced by the urban edge of Hemel Hempstead, the overall value of the area is judged to be 'medium'. Its susceptibility to change is also judged to be 'medium', reflecting its relatively restricted visibility and existing detractors. Overall, this gives it a '**medium**' sensitivity.
- 6.4.27 Other character areas within the wider study area, as shown on Figure 6.2, are Bourne Gutter and Hockeridge Bottom, Bovingdon and Chipperfield Plateau, Hemel Hempstead, Revel End Plateau, Nettledone Ridges and Valleys, Ashridge, Berkhamsted and Berkhamsted Castle Farmlands. These do not form part of this assessment due to the lack of direct impacts the proposals would have on their characteristics and the lack of intervisibility between them and the site.

Landscape Features and Context

TOPOGRAPHY

- 6.4.28 The topography of the area is shown on Figure 6.3. The site is situated on the northern valley side of the River Bulbourne, which passes in an east-west direction through Berkhamsted on the western side of the study area and through the southern edge of Hemel Hempstead to the east. To the north and west of the site, the landform is formed by a number of shallow dry valleys and low ridges, creating a gently undulating landscape between 110 and 170 metres AOD around Potten End, some 2.0 kilometres to the north of the site and extending westwards up to the edge of Berkhamsted, approximately 2.5 kilometres from the site.
- 6.4.29 To the south of the site, the southern slope of the River Bulbourne is formed by a number of dry valleys and low ridges, which extend south towards Bovingdon approximately 3.5 kilometres from the Study Area. To the east of the site, the elevated undulating landform between 90 and 135 metres AOD, continues east up to the River Gade valley, which runs through the centre of Hemel Hempstead. To the east of the River Gade, the undulating landform continues to a broad ridge at about 130 to 135 metres AOD, which runs eastwards from Adeyfield and Jarman's Park towards Leverstock Green and the industrial areas of Hemel Hempstead near the M1 motorway.
- 6.4.30 At its highest point, at its northern boundary with Pouchen End Lane, the site itself lies at 158m Above Ordnance Datum (AOD), sloping down to 126m AOD to the south-east at Long Chaulden and then from the centre of the site, directly down to the south at Chaulden Lane, where it is 97m at its lowest point.
- 6.4.31 Given its prominence in the site's character and its influence on the visibility of the site, the topography is judged to be of '**medium**' sensitivity, being of medium 'value' and 'high' 'susceptibility to change'.

LAND USES

6.4.32 The site consists of 51.57ha of agricultural land. It comprises 13 fields, as shown on Figure 6.5 and described in Table 6.18. The adjacent field belonging to Hertfordshire County Council and proposed for future development (F2) is also listed. Further detailed information on the vegetation within each field is provided in Section 7 Ecology.

Table 6.18: Site Land Use

Field	Land Use
F1	Poor semi-improved grassland: hay meadow + small coniferous plantation
(F2)	Horse grazing
F3	Neutral semi-improved grassland: horse grazing
F4	Poor semi-improved grassland: horse grazing
F5	Poor semi-improved grassland: hay meadow
F6	Fallow arable (currently grass)
F7	Fallow arable (currently grass)
F8	Unmanaged poor semi-improved grassland: machinery storage etc
F9	Unmanaged poor semi-improved grassland: machinery storage etc
F10	Poor semi-improved grassland: horse grazing
F11	Poor semi-improved grasslands
F12	Neutral semi-improved grassland: dry attenuation basin
F13	Arable
F14	Arable

6.4.33 With regards to the wider area, the site is located approximately 2.5 kilometres from Hemel Hempstead town centre and is situated on the western edge of the town immediately west of the existing housing area of Warners End and Chaulden and north of the River Bulbourne valley. To the immediate west of the site lies the small hamlet of Pouchen End, whilst to the south west is the hamlet of Winkwell on the Grand Union Canal with the village of Bourne End located beyond on the A4251. Fields to the west and north of Pouchen End Lane are predominantly in arable production, although there are clusters of smaller pasture fields immediately to the west of the hamlet of Pouchen End and to the north at Fields End. To the east of the site is the western edge of Hemel Hempstead, including the mid-late twentieth century suburbs of Chaulden and Warners End. To the south, the River Bulbourne and southern valley side including Westbrook Hay predominantly consists of pasture grass, together with a golf course (Little Hay Golf Complex) and woodland (Hay Wood, Hanging Wood, Green Croft and Ramacre Wood). Further south, woodland is also interspersed with built development along Box Lane and at Felden, including Bury Wood and Sheethanger Common.

6.4.34 Given that the site predominantly includes arable and semi-improved grassland land uses that are typical of the wider area and its rural character has been eroded by the use of pony paddocks, introduction of a coniferous plantation and unmanaged storage areas, its value, susceptibility to change and overall sensitivity are all judged to be **'medium'**.

ACCESS AND PUBLIC RIGHTS OF WAY

6.4.35 Public rights of Way are shown on Figures 6.4 and 6.5. These show that there are three footpaths that run within the site boundary:

- Public Footpath No 20, which forms part of the Chilterns Way long distance recreational path and the Grand Union Canal Circular Walk around Hemel Hempstead. This footpath runs from Long Chaulden northwards, following the edge of the built up area, to connect to Fields End Lane to the north of the site.

- Public Footpath No 21 which follows the northern boundary within the site and extends from Pouchen End Lane eastwards to connect to Public Footpath No 20 at the north-eastern corner of the Study Area.
- Public Footpath No 91 which extends westwards from the built up edge to connect to Pouchen End Lane to the north of Pouchen End Farm.

6.4.36 Given their recreational value, all of these rights of way are categorised as being of 'high' sensitivity, being of 'high' value and 'high' susceptibility to change.

6.4.37 To the north of the site, the Chilterns Way continues towards Boxted Farm whilst to the west, the Hertfordshire Way runs down Little Heath Lane, approximately 0.8km from the site. To the south of the River Bulbourne, there are also a number of Public Footpaths and Bridleways lying on the rising ground, including the Hertfordshire Way (south of Bourne End and the A41) and Public Rights of Way crossing Boxmoor, Westbrook Hay estate land and Sheethanger Common, including a further section of the Chilterns Way. As these will not be directly affected by the proposals public rights of way beyond the site's boundaries, they are not included in the landscape impact assessment, however potential visual impacts on users of the paths are covered in the visual impact assessment.

VEGETATION

6.4.38 Vegetation within the site is predominantly structured around the agricultural field boundaries. A tree survey has been undertaken by Ian Keen Ltd consisting of four Tree Constraints plans (see Appendix 2.2). This includes surveys of trees and hedgerows within the site and is summarised on Figure 6.5. The hedge references are shown on the Habitats Plan (Figure 7.1) accompanying Chapter 7 Ecology. Further detailed assessment of site vegetation, including hedgerows, is also included in Section 7 Ecology.

6.4.39 Immediately beyond the site's northern boundary is a belt of deciduous native Category B (Moderate) quality trees, some 25 metres in width, that helps to curtail views into the site from the north. Within the site itself, a further 25m deep plantation of Category C (Low) quality native deciduous trees is situated along much of the site's northern boundary.

6.4.40 The western section of the northern site boundary is formed by a trimmed hedgerow (H23), some 2 metres in height, adjacent to Pouchen End Lane. This consists predominantly of Category B hawthorn and blackthorn species, with a number of individual Oak and Ash trees located within the hedge. This hedgerow continues around the western side of the site (H14), where it increases in height to 9m in places, including sycamore, field maple and hazel.

6.4.41 The middle section of the western boundary at Pouchen End consists of both Category B and Category C hedgerows. Adjacent to the properties at Pouchen End, this hedgerow is on a bank and includes trees up to 10m in height. The southern section of the site's western boundary (H4 and H5), including the hedgerow adjacent to the proposed travellers site, are Category B hedgerows, including ash, field maple, hawthorn and blackthorn. These are 5-10m in height and provide screening.

6.4.42 The southern boundary of the site follows Chaulden Lane. At its western end (H6), the hedgerow (Category B) is on a roadside bank and includes hawthorn, blackthorn and hazel. In the middle (H8), the hedgerow (Category C) includes conifers that are alien to its native setting. At its eastern end, adjacent to the Hertfordshire County Council Land, the boundary consists of post and wire fencing together with an intermittent hedgerow (H26) up to 7m in height and including field maple, hazel and holly. This Category C hedgerow is intermittent but includes

some Category B field maple on a bank adjacent to the site.

- 6.4.43 The site's eastern boundary follows an irregular alignment following the built up edge of Hemel Hempstead. The southern section of the eastern boundary, adjacent to the Hertfordshire County Council land (H27) lies adjacent to properties served off Campion Road and is a Category C native hedgerow. North of this, a Category B hedgerow (H11) lies adjacent to Furze Road, Lindlings, Honeycross Road and Musk Hill, including hawthorn, blackthorn and ash. To the north of Musk Hill and Honeycross Road, the boundary turns east, to follow Public Footpath No 91. This boundary is defined by rear garden fences and a Category C hawthorn hedge (H20). The middle section of the eastern boundary (H19) is formed by blackthorn and bramble scrub and a line of mature Category B oak and ash. Twelve Category A (good) quality oak trees are also situated within this hedgerow, together with a further Category A oak tree that has its trunk immediately outside the site's boundary.
- 6.4.44 Adjacent to Long Chaulden, the eastern boundary of the site includes an overgrown strip of ash saplings which allows views into and out of the site (H25). These are not categorised within the Tree Survey. Located close to this boundary to the north of properties on Middle Hill, is an outgrown Category B hawthorn hedgerow (H21). Next to this is a small rectangular area of woodland lying on sloping ground. This Category B mixed broadleaf copse includes oak and ash, with some hawthorn, elder, hazel and holly. The woodland extends into the site and partially screens views west from Long Chaulden into and across the site.
- 6.4.45 The remainder of the eastern boundary to the site is formed by an existing tall, double hedgerow and mature trees which are situated either side of Public Footpath No 20/ Chiltern Way. The hedgerow (H24) is Category B and includes hawthorn, hazel and holly species. Within these hedgerows are a number of individual Oak and Ash trees, some of which are covered by TPO 453. Some of these trees are Category A (good) trees. These hedges effectively screen views into the Study Area from the adjoining properties; however views are possible through gaps in the western hedgerow from the public footpath.
- 6.4.46 Within the main parts of the Study Area, there are a number of hedgerows and groups of trees that subdivide the open fields. Four of these are aligned north to south (hedges H7, H15, H16 and H22) and three aligned east to west (H17 and H12 and H13) sub-dividing the open fields. These are generally Category B hedgerows and include a significant proportion of Category B trees, the majority of which are oak and ash. Within H15 there is also 1no. Category A Oak and within H16 there are also 3no. Category A oaks. Within H13 there are two further Category A oaks.
- 6.4.47 Within the south western parts of the Study Area, following a north-south alignment, is a line of mature tall Category C Poplar trees and block of young conifer trees (H7) which are about 1.5 to 2 metres in height. The belt of conifer trees (the majority of which are non-native species) is approximately 30m in width.
- 6.4.48 To the east of the H15 and north of H17 is an area of Category C tree and shrub planting approximately 25 metres in width, which includes ash, elm, goat willow, field maple, rowan, birch and oak with the southern portion of this planting (following H12), also including Viburnum and Eucalyptus species.
- 6.4.49 Within the southern central parts of the Study Area running east-west, adjacent to Public Footpath No 91, is a tall hedgerow with oak and cherry tree species (H13) and a section of young hedgerow (H12) consisting of hawthorn, blackthorn, hazel and elder species, with a

number of young trees within the line of hedge including oak, ash and rowan tree species. To the north of this section of hedge is a 10-20 metre belt of recently planted Category C mixed species trees and shrubs approximately 5 metres in height.

- 6.4.50 In addition to these hedgerows, there is a well maintained hedgerow (hedges H9 and H10) enclosing the HCC land. The species within the hedgerows generally consist of hawthorn, blackthorn, wild rose and hazel, with groups of oak and ash trees.
- 6.4.51 With regards to the overall sensitivity of vegetation on the site, Category A trees are judged to be of 'high' value and susceptibility to change and overall sensitivity receptors, whilst Category B and C trees are judged to be 'medium' and 'low' overall sensitivity respectively.

Visual Amenity

- 6.4.52 The visual survey describes the existing views towards the site. It has been informed by the preparation of a computer-generated 'Zone of Theoretical Visibility' (ZTV) (see Figures 6.6 and 6.7), which calculates whether 'target points' of up to 15m in height could be visible from a 2km radius. The analysis is based on terrain alone, and does not allow for the screening effects of any intervening trees or buildings for example.
- 6.4.53 The locations of the viewpoints described are shown on Figures 6.6 and 6.7, with winter photographs from the viewpoints provided at Figures 6.8 to 6.19. These include views taken from within the site from public rights of way, which give an indication of the site's context.
- 6.4.54 Illustrative photomontages have been prepared for View 18 and View 20 at the request of Dacorum Planning Authority. These provide an indication of the changes that will be experienced by the more panoramic views to the south.
- 6.4.55 The site survey shows that the site benefits from visual containment provided by the plateau topography to the north and hedgerow vegetation to the north and west and the built environment of Chaulden and Warners End to the east. From these areas, the main visual receptors will be users and residents of Pouchen End Lane, users of the Chiltern Way adjacent to the site's eastern boundary and occupiers of houses and users of streets immediately adjacent to the site's eastern boundary, namely (from north to south) Squirrel Chase, Poppy Close, The Avenue, The Meadows, Newlands Road, Long Chaulden, Middle Hill, Rowcroft, Musk Hill, Honeycross Road, Lindlings, Furze Road and Champion Road.
- 6.4.56 To the south, the site benefits from some strong hedgerow vegetation along both sides of Chaulden Lane, especially at its western end, however towards the east, this vegetation is sparser. Beyond this, vegetation along the Bulbourne valley also provides localised screening. Further south, users of a transport corridor that includes the A4251 which is situated on the lower slope of the southern side of the Bulbourne valley and West Coast Mainline railway line that is situated on an embankment, also have glimpsed views into the site. The A41 which also lies within this corridor does not have intervisibility with the site due to its position within a cutting at this point. The Grand Union Canal has very limited intervisibility with the site due to screening by the West Coast Mainline railway and intervening vegetation. The site can be seen from a short section of the Grand Union Canal and adjacent Recreational trail to the south-east of the site where the canal is located to the north of the West Coast Mainline rail embankment and south of Chaulden. The setting of the Grand Union Canal is also covered in Chapter 8 Archaeology Heritage.
- 6.4.57 Beyond this transport corridor to the south of the site, the land rises up to form the southern

valley side of the River Bulbourne. Whilst there are few residential properties here, the open countryside includes areas used for recreation, including Little Hay Golf Complex, Sheethanger Common and Westbrook Hay. These areas include several public rights of way, including the Hertfordshire Way that crosses Little Hay Golf Complex and the Chiltern Way. To the south-east, this valley side is occupied by the residential areas of Felden and Box Lane. Further to south-east, a short section of the A41 dual-carriageway has views towards the site as it drops down the hill close to Apsley.

6.4.58 Potential visual receptor groups are listed in Appendix 6.1 at Table 6.19, together with an appraisal of their current views and sensitivity. This shows that the only 'high' sensitivity receptors are users of public rights of way and open access land with strong rural views:

- Footpath 21 that runs through the northern section of the site and Footpath 20;
- the Chiltern Way, that runs through and adjacent to the site's north-eastern boundary;
- A short section of the Grand Union Canal Walk to the south-east of the site; and,
- Users of Sheethanger Common.

6.4.59 The majority of other potential visual receptors are of 'medium' sensitivity, reflecting their position within residential properties or on recreational footpaths with lower quality views. 'Medium' sensitivity receptors include:

- users of Footpath 91 across the southern part of the site.
- users of Pouchen End Lane to the north and west of the site.
- residents of Broom Hill, Rowcroft, Middle Hill, Champion road, Furze Road, Lindlings, Musk Hill, Long Chaulden, Newlands Road, The Meadows, The Avenue, Poppy Close & Squirrel Chase adjacent to site boundary.
- users of Chaulden Lane to the south of the site.
- users of Little Hay Golf Complex to the south, including the Hertfordshire Way.
- walkers at Westbrook Hay.
- residents of Felden and Box Lane area.

6.4.60 Potential visual receptors classified as being of 'low sensitivity' consist of road and rail users, namely:

- users of Champion Road, Furze Road, Lindlings, Musk Hill, Broom Hill, Rowcroft, Middle Hill, Long Chaulden, Newlands Road, The Meadows, The Avenue, Poppy Close and Squirrel Chase adjacent to site boundary;
- users of the West Coast Mainline railway to the south of the site;
- users of the A4251 London Road to the south; and,
- users of a short section of the A41 to the west, close to Apsley.

6.5 Potential effects

6.5.1 This section identifies the sensitive landscape and visual receptors and outlines the potential significant effects of the development in the absence of mitigation. The incorporation of open space and tree planting shown on the parameter plans is assumed to be 'inherent' mitigation

and is included as an integral part of the development as assessed within this section. 'Additional mitigation' is considered to be detailed tree and hedgerow planting that is not specifically shown on the parameter plans and the effects of this is covered in Section 6.7 Residual effects.

- 6.5.2 Effects are defined for both the construction (temporary/ short term) and operational (permanent/ long term) phases of the development. Whilst potential cumulative effects have been considered, none were apparent (see Section 6.8).
- 6.5.3 The landscape and visual effects occurring during the construction period would be temporary, expected to last for a period of up to 10 years. The main components of the assumed construction activities, that have been taken into account in the assessment of potential temporary landscape and visual effects are:
- Excavations/ soil stripping activity including earthworks
 - Presence of site hoardings/ fencing, including protective fencing to vegetation to be retained.
 - Limited removal or remedial works to vegetation on the site.
 - Presence of fixed and mobile vehicles and construction plant, including cranes.
 - Presence of materials stockpiles.
 - Presence of site compound/ hut, and temporary utilities.

Assessment of Potential Landscape Effects

POTENTIAL LANDSCAPE EFFECTS: CONSTRUCTION

- 6.5.4 Appendix 6.1 Table 6.20 shows that during the construction period, the highest magnitude of change in the landscape baseline would occur within the site, principally within the area proposed for built development.
- 6.5.5 No designated assets would be affected. The construction site would not be visible from the Chilterns Area of Outstanding Natural Beauty although a small element of the AONB would be visible within the same view, when seen from the Sheethanger Common area. Given the distance from the viewer and small area of the AONB visible, this is judged to be a '**negligible adverse**' effect on its setting.
- 6.5.6 The construction works would give rise to a '**moderate adverse**' change in character to the parts of the Landscape Character Assessment of Dacorum's 'Lower Bulbourne Valley' and 'Little Heath' Uplands landscape character areas in which the site sits, whereby a small proportion of the wider character area would see its overall character change from semi-improved grassland and arable land to a construction site. Effects on National Character Area 110 Chilterns would be '**minor adverse**' given that the site has few key characteristics that reflect this wider area.
- 6.5.7 The construction would also have a '**minor adverse**' effect on the landform of the site, reflecting its sloping nature and the necessary earthworks that will be required in the construction of the access roads, buildings and SUDS features.
- 6.5.8 The construction would not affect the three footpaths that pass through it, but would have '**indirect 'adverse' effects**' on their settings, whereby their views across open fields and settlements of Chaulden, Warner's End and Pouchen End beyond are replaced by a construction site in the foreground. The effects on the settings of Footpath 21 adjacent to the

northern edge of the site and Footpath 20 (Chiltern Way) adjacent to the western part of the site will both be '**major adverse**', reflecting their high sensitivity and rural character. Effects on the setting of Footpath 91 across the centre of the site will be '**moderate adverse**', this lower impact reflecting the urbanising influence that the visible edge of Chaulden and the transport corridor to the south already have.

6.5.9 The impact of the loss of grassland habitat and hedgerows are covered in Chapter 7 Ecology.

6.5.10 The construction works would not require the removal of any Category A trees. It would however, require the removal of the following Category B (Moderate) trees and tree groups. These are judged to be of 'medium' sensitivity and their removal would have a '**moderate adverse**' effect. The reference numbers are those shown on the Ian Keen Ltd Tree Survey (Appendix 2.2).

- Potential removal of Trees 130, 131 or 134 (all English oak) to facilitate construction of visibility splay at entrance to travellers site.
- Tree group 84: Removal of 4 trees (oak and ash) and approximately 940 sq.m of scrub understorey (hawthorn, elder, hazel and holly) to facilitate cycle way and SUDS construction off Chaulden Lane.

6.5.11 The works would also require the removal of the following Category C (Low) trees and tree groups. These are judged to be of 'low sensitivity'. Whilst normally, the removal of Category C trees is not judged to be significant, the extents of the plantations would have a notable effect due to the areas covered. Overall this removal would therefore have a '**moderate**' adverse effect:

- Tree Plantation 55: 0.65ha mixed broad leaf plantation. These have an average height of 5m. The plantation is described in the Tree Survey as "*Recently established linear plantation along field boundary. Species include goat willow, rowan, poplar, hazel, beech, viburnum, field maple, cherry, silver birch and English oak. Varied degrees of success with some areas well established and others sparse*".
- Tree Group 57: 0.2ha group of silver birch. This is described in the tree survey as being a group of most likely '*self set trees amidst an area of small tree planting*' with an average height of 7m.
- Tree Plantation 80: 2.5ha of mixed broad leaf plantation. These have an average height of 5m. The plantation is described in the Tree Survey as "*Recently established linear plantation along field boundary. Species include goat willow, rowan, poplar, hazel, beech, viburnum, field maple, cherry, silver birch, eucalyptus and English oak. Varied degrees of success with some areas well established and others sparse*".
- Tree Group 125: 194 linear metre row of poplar with an average height of 14m.

6.5.12 In addition to the above trees, the proposals would also require the removal of approximately 0.45ha of 'Christmas Tree plantation' and 95 linear metres of ash sapling along the Long Chaulden boundary. These are not classified within the tree survey.

POTENTIAL LANDSCAPE EFFECTS: OPERATIONAL PERIOD

6.5.13 Potential landscape effects following construction are set out in Appendix 6.1 Table 6.21. During the operational period, without additional landscape mitigation in place, the greatest magnitude of change would occur to the character of the site, vegetation and landform, all of which would experience '**moderate adverse**' effects.

6.5.14 Table 6.12 shows that the proposals would have '**moderate adverse**' effects on the small part

of the Lower Bulbourne Valley and Little Heaths Uplands Landscape Character Areas, within which the development would lie, with the existing semi-improved grassland and arable being replaced by housing, access roads and parks and open spaces. Effects on land use would similarly be '**moderate adverse**'.

- 6.5.15 There would also be 'moderate adverse' effects on a small number of Category B trees within the site (see paragraph 6.5.10) (Group 84) due to the access works off Long Chaulden and the potential loss of up to three oak trees to facilitate the construction of the visibility splays for the access to the travellers site.
- 6.5.16 The removal of the small number of mature Category C trees together with the young Category C plantations would have a potential '**moderate adverse**' effect, reflecting their low sensitivity, but also the relatively extensive areas of the plantations.
- 6.5.17 The development has been designed to sit within the existing landform, but would result in permanent, localised earth modelling throughout the site to accommodate the new access roads, buildings and SuDS features, having a '**moderate**' impact on landform.
- 6.5.18 Effects on the three footpaths would be mixed. Each would be surfaced with a self-binding gravel. This would retain their rural character whilst enabling easier access for users, having a 'moderate beneficial' effect. The impacts on their settings would be negative however, as their semi-rural setting is replaced by one of new housing set within a relatively immature landscape. The effects on Footpath 21 adjacent to the northern edge of the site would experience 'major' changes to its views, reflecting its high sensitivity with current open rural views. Effects on Footpath 20 (Chiltern Way) adjacent to the western part of the site will be 'moderate adverse', reflecting its high sensitivity and rural character but also the benefitting effects of existing hedgerow vegetation on its south-western side. Effects on Footpath 91 across the centre of the site will be 'moderate adverse' reflecting its high sensitivity but also the urbanising influence of the visible edge of Chaulden and transport corridor to the south.

Assessment of Potential Visual Effects

POTENTIAL VISUAL EFFECTS: CONSTRUCTION PERIOD

- 6.5.19 Appendix 6.1 Table 6.20 shows that during the construction period, the greatest degree of change would be on users of Footpaths 21 and 20, both of which pass through the site. As described in 6.5 above, their views across open fields and settlements of Chaulden, Warner's End and Pouchen End beyond would be replaced by a construction site in the foreground having a 'major adverse' effect on users. Users of Footpath 91 would experience a '**moderate adverse**' effect, reflecting the urbanising influence that the visible edge of Chaulden and the transport corridor to the south already has.
- 6.5.20 Other recreational visual receptors within the local area would all experience 'moderate adverse' visual effects. These consist of:
- users of Pouchen End Lane immediately to the north and west of the site;
 - users of Chaulden Lane immediately to the south;
 - users of the Little Hay Golf Complex and Hertfordshire Way to the south;
 - walkers on a short stretch of the Grand Union Canal Walk to the south-east; and,
 - walkers at Westbrook Hay and Sheethangers Common to the south.

- 6.5.21 The views of these groups to the south all focus on the southern part of the site, with the northern fields located further back on a plateau. The site is seen as part of a much wider panoramic view that includes the urbanising influences of the built form of Hemel Hempstead and the transport infrastructure associated with the West Coast Mainline railway and A41 dual carriageway to the south of the site.
- 6.5.22 Residential visual receptors that would experience change are generally focussed immediately adjacent to the site's boundaries, and would experience '**moderate adverse**' effects. These consist of:
- residents of the eastern side of Pouchen End.
 - residents of Campion Road, Furze Road, Lindling and Musk Hill within Chaulden, adjacent to the southern part of the site's eastern boundary.
 - residents of Broom Hill, Rowcroft and Middle Hill, adjacent to the middle of the site's eastern boundary.
 - residents of Newlands Road, The Meadows, The Avenue, Poppy Close and Squirrel Chase within Warner's End, adjacent to the northern part of the site's eastern boundary.
- 6.5.23 These properties would see open or glimpsed changes to views from the rear of their properties, as the new construction site will be seen beyond their private gardens and boundaries in the foreground.
- 6.5.24 Further away to the south-east, residents of the north-facing valleyside to the south of the site, at Box Lane and Felden would also experience '**moderate adverse**' changes to their views. Due to their elevated nature some properties in this area have panoramic views across Hemel Hempstead and the countryside to the west, including the southern and central parts of the site. The construction site would appear as a clearly apparent element within the wider view.
- 6.5.25 Users of roads immediately surrounding the site (see paragraph 6.5.22) will see glimpses or open views of the new construction site, generally between existing housing in the foreground. The change to the view will be apparent, but given the relatively low sensitivity of the receptors and low values of the views, the overall effects will be '**minor adverse**'.

POTENTIAL VISUAL EFFECTS: OPERATIONAL PERIOD

- 6.5.26 The visual effects occurring during 'operation' are considered to be permanent. Appendix 6.1 Table 6.21 shows that during the operational period, without additional landscape mitigation the overall degree of visibility and visual effects would be similar to that of the construction site (see paragraphs 6.5.19 to 6.5.25), with significant impacts relating to users of the public footpaths that cross the site, users of recreational lanes, footpaths and open access land in the wider area, residential properties immediately adjacent to the site's boundaries and residential properties in the Box Lane and Felden areas to the south-east.

6.6 Mitigation and enhancement

- 6.6.1 The parameter plans (including Figure 3.3 - Green Infrastructure Parameter Plan) and detailed application drawings for the first phase (including Figure 3.6 – Composite Phase 1 Site Layout) show that the scheme takes a landscape led approach to its layout, incorporating green corridors of public open space adjacent to all of its boundaries as well as through the centre of the site adjacent to existing hedgerows. The green infrastructure of the site layout would respond both to the site's existing topography and natural features, which includes trees and

hedgerows, as well as to the surrounding landscape and existing footpaths. Key to this would be the establishment of strong, accessible and biodiverse east-west green linkages that connect Hemel Hempstead and the development to the countryside beyond. All components of the urban realm (school, housing, community and retail) would be set within an extensive network of green spaces, ensuring the new landscape is both permeable for wildlife and can also be readily traversed by pedestrians and cyclists within an attractive and tranquil environment.

6.6.2 The existing hedgerows will be retained as integral parts of the development structure. These will form the basis of key wildlife corridors running through the site and managed so as to enhance their biodiversity. These will be accompanied by a significant number of other open spaces that will be managed so as to maximise biodiversity. These will form the basis of a more substantial quantum of open space throughout the site. These will:

- Deliver a range of multifunctional green spaces and clear open space hierarchy and network of varied spaces, providing opportunities for children's play, recreation paths, nature conservation and Sustainable Urban Drainage Systems.
- Provide green settings to public footpaths 20 and 91.
- Allow for the retention of existing vegetation and new vegetation between the new homes and existing residents to the north and east.
- Accommodate for the root protection areas of existing trees and retain all Category A and B trees on the site wherever possible.
- Ensure mature hedgerows and hedgerow trees are conserved.
- Provide connected green corridors for wildlife, pedestrian and cycle movement. East-west corridors are particularly important, providing links from Hemel Hempstead to the countryside. A network of pedestrian and cycle routes within the proposed open space network will link in with Pouchen End Lane to the north and west, The Avenue, Squirrel Chase, Chiltern Way and Long Chaulden to the east and Chaulden Lane to the south.
- Provide visual softening, helping to integrate the new buildings with the wider landscape and townscape.

6.6.3 The parameter plans (see Figure 3.3 - Green Infrastructure Parameter Plan) also show a significant proportion of the site would be retained as a large multi-functional open space, 'Pouchen End' Park. This would be located adjacent to the site's south-eastern boundary and also subdivide the northern and southern parts of the site, crossing it in an east-west direction. This will include a Local Equipped Area for Play and dry attenuation basins. A smaller multi-functional open space is also shown adjacent to the Community Hub, including a Neighbourhood Equipped Area for Play.

6.6.4 All of the above features are 'inherent' mitigation features within the scheme and have therefore been assumed throughout the judgements with regards to 'potential' landscape and visual effects made in Section 6.6.

6.6.5 In addition to these effects, the planning application provides further detailed landscape proposals for the first phase area as well as the Illustrative Green Infrastructure Strategy (Figure 3.16) for the entire site. These are considered to be 'additional' mitigation measures that are taken into account when judging the overall 'residual' effects in Section 6.7 below.

6.6.6 These include:

- Retention of the network of mature trees and hedgerows and further supplementing and reinforcing these networks with new planting.

- Compensation for the loss of a small area of native woodland at the Long Chaulden entrance with a larger area of new woodland on the site's western boundary.
- Chalk Grassland: Informal open space would incorporate significant swathes of chalk grassland, creating a chalk downland feel, with occasional scattered shrubs/trees.
- Reptile Receptor Area (delivered as part of first phase): An area of open chalk grassland on the western side of Pouchen Park would be retained as a reptile receptor area. This would be managed so no more than 50% of the entire grassland would be cut in any one year and will be informally demarked with a timber knee rail, and presented as a 'nature conservation area' to justify its likely less well kept look.
- Dry Attenuation Basins (south): Dry basins in the southern part of the site would be managed as chalk grassland, and sown with a calcareous wildflower/grass mix, with chalky subsoils exposed and arisings used to create chalk/'butterfly' banks. No additional topsoil or organics would be added. Any wetter areas would be allowed to develop into calcareous fen/wet flush habitats.
- Dry Attenuation Basins (north): In the northern part of the site, where chalky substrates aren't present a similar approach would be taken, but with a wildflower mix suited to the conditions.
- SUDS-Conveyance features: Swales would be treated as attenuation basins, with wet wildflower seed mixes sown. The ditches in chalky areas would be allowed to develop into fen/wet flush habitats where possible.
- Wet Attenuation Basins (delivered as part of first phase): The two attenuation basins at the Long Chaulden entrance would be designed to include a variety of vegetation and habitats, including submerged/emergent and marginal plant species at the edges and wet grassland/marsh within the freeboard areas. The detailed design of the pond could also include a 'shoal' of shallower land at the eastern end and areas of deeper water to prevent invasion by reeds and bulrushes for example.
- Retained hedges/treelines: These key wildlife corridors will include reinforcing with underplanting and the provision of long grass/wildflower margins where possible. These scalloped margins will create an 'ecotone' gradient, grading from the existing hedgerow through low shrubs, ruderals to long grassland (woodland edge/hedge seed mix). Hedgerows will be trimmed and laid as necessary to ensure the good long-term health of the features. Adjacent to the Chiltern Way, the hedgerow will be reduced to approximately 1.2m in height to enhance natural surveillance and strengthen the hedgerow structure.
- Woodland Mitigation Area: An area of new woodland will be provided adjacent to the site's western boundary to compensate for the loss of a small area of existing woodland close to the Long Chaulden frontage. This will be larger than the area that will be lost.
- Opportunity for community orchard within the Pouchen Park.
- Opportunity for community food-growing garden adjacent to Community Hub.

6.7 Residual effects

Residual Landscape Effects

- 6.7.1 A description of the likely residual landscape effects is provided at Appendix 6.1, Table 6.22. This covers operational effects only as effects during construction will remain as set out in Section 6.5. The assessment assumes that proposed vegetation is well established, 15 years following planting.
- 6.7.2 The proposals will have an indirect '**negligible adverse**' effect on the Chilterns AONB, given

that the only changes will be to an extremely limited view of the AONB when viewed in conjunction with the site from restricted parts of the Sheethanger Common area. Given that views here already include the western part of Hemel Hempstead, the effect on the AONB will scarcely be appreciated.

- 6.7.3 The assessment shows that effects on the landscape character of both the Lower Bulbourne Valley and Little Heaths Uplands will both have reduced to **'minor adverse'**. Whilst 36ha of agricultural land will have been replaced by built infrastructure, the site will retain 15.5ha of green spaces. These will generally be of higher biodiversity and landscape value than much of the site currently is, and by planting with native grassland, trees and shrubs adverse effects can be mitigated. Effects on the Chilterns National Landscape Character Area will be **'negligible adverse'** reflecting the small proportion of the area that will be changing, the relative weakness of the existing landscape character in this area and the net enhancements that will be occurring within the green space areas. Effects on the 'land use' of the site are judged to remain **'moderate adverse'** reflecting the loss of agricultural land.
- 6.7.4 The residual effects on the site's landform would be **'minor adverse'** as the localised earthworks will be integrated with the wider landscape by established vegetation.
- 6.7.5 The footpaths crossing the site will experience **'moderate beneficial' effects** on their path surfacing as their new gravel construction continues to weather into the surrounding open spaces. The setting of the paths will have changed, from either open views across arable fields (Footpath 21), glimpsed views through adjacent hedgerows (Footpath 20, Chiltern Way) or open views across pony paddocks and the edge of Chaulden (Footpath 91) to views that include new housing frontages. These views will include new green corridors in the foreground with establishing native trees softening views of the buildings beyond. Whilst these views are different, they need not necessarily be negative, and the changes are therefore judged to be **'neutral'**.
- 6.7.6 With regards to trees and vegetation, the additional mitigation will allow for numerous native trees and shrubs to be planted throughout the site's open spaces as well as ornamental shrubs within front gardens. Given that the only trees to be removed were either Category C (poor) or relatively young plantations, the establishment of the proposed new structural planting will compensate appropriately for the removal of the previous trees, having an overall **'neutral'** effect.

Residual Visual Effects

- 6.7.7 The new planting will make a significant difference to the landscape effects of the development and after 15 years it will be sufficiently tall to provide good screening to the edges of the site where trees have been planted as woodland strips of up to 10m in width. The retention and supplementing of the east-west oriented hedgerows will help the integration of the new buildings with the wider landscape when viewed from the elevated viewpoints to the south such as Little Hay Golf Complex, Sheethanger Common and Westbrook Hay.
- 6.7.8 Table 6.22 in Appendix 6.1 shows that there are very few significant effects on visual amenity. The main ones (**'moderate adverse'**) will be on views from the elevated recreational areas to the south of the site, where the southern and central parts of the development will form a clear element within a wider panoramic view. These views, from Little Hay Golf Complex and Westbrook Hay, already include a relatively extensive area of Hemel Hempstead as well as some elements of transport infrastructure associated with the A41 and West Coast Mainline,

thus reducing their overall value. Closer to the site, the proposed development will appear as a sympathetic extension to existing housing in Chaulden and Warner's End. Residents on the eastern side of Pouchen End and within Middle Hill may also experience '**moderate adverse**' effects with views of new housing beyond their rear gardens.

- 6.7.9 Other residential receptors and road users surrounding the site boundaries will benefit from more extensive areas of planting between their properties and new housing, within new green corridors, retained mature hedgerows and the new Pouchen Park. These visual receptors, including residents of Campion Road, Furze Road, Lindlings, Musk Hill, Broom Hill, Rowcroft and Long Chaulden, will generally experience '**neutral**' changes to their views, with occasional 'minor adverse' effects where views of new housing are clearer. Residents immediately to the north-east of the site, including Newlands Road, The Meadows, The Avenue, Poppy Close and Squirrel Chase will generally benefit from the existing screening provided by the mature trees adjacent to both sides of Footpath 20 (Chiltern Way), however where there are glimpses into the site, at the new access off The Avenue for example, effects will be '**minor adverse**'.

6.8 Cumulative effects

- 6.8.1 As set out in Chapter 3, paragraph 3.10.7, there are four applications identified as requiring further consideration in a cumulative assessment, as well as the additional area of West Hemel DPD LA3 land immediately to the south of the site. These have all been appraised in conjunction with this proposed scheme, in terms of their cumulative effects on both landscape and visual amenity.
- 6.8.2 The four sites with planning consent all form part of the existing built environment of Hemel Hempstead and do not have the same landscape character. There will therefore be no cumulative effect on landscape or townscape character resulting from the site's development.
- 6.8.3 The four sites with planning consent would not be seen in any views in conjunction with the West Hemel Hempstead site and as such would not result in any 'combined' cumulative visual effects. Users of the railway line to the south of the site may see the Symbio Place development a few seconds/after seeing the site, however both will also be seen in conjunction with the existing urban form of Hemel Hempstead and not result in a significant 'sequential' cumulative effect. The field to the immediate south-east corner of the site forms part of the wider LA3 site and as such could come forward for residential development. As described in paragraph 3.10.8 above, as there is currently no detailed planning application proposals relating to this site, it is not possible to fully consider cumulative effects. Given the likelihood that any development would form a small area (c.1.32ha) of housing of similar density and height as that proposed on the wider LA3 site, together with associated open space, it is not likely that there would be significant cumulative landscape and visual effects relating to their combined development.
- 6.8.4 The proposed development will require off site works. These comprise both highways junction improvements (see ES Chapter 3 para 3.1.22 and figure 3.32-3.36 and also an anticipated requirement for an off-site underground sewer connecting the Proposed Development to Berkhamsted Waste Water Treatment Works (see ES chapter 3, para 3.9.3-3.9.4 and Figure 3.37). In relation to any potential landscape and visual impacts, all of the above highways works would take place within the boundaries of existing public highways and would comprise kerb realignment, line painting and other minor amendments. In terms of the off-site sewer, this would be located within the public highway and be located underground. As such no significant effects are predicted to arise from these elements of the project.

6.9 Conclusion

Potential Landscape and Visual Effects

- 6.9.1 The Landscape and Visual Impact Appraisal assess the impacts of the proposals set out in parameter plans, both during construction and once operational (at the time of completion).
- 6.9.2 These potential effects both showed that the significant effects would be on the 'Lower Bulbourne Valley' and 'Little Heaths Uplands' Landscape Character Areas in which the site is located ('moderate' adverse effects) and the setting of three footpaths which run through the site ('moderate adverse' effects on Footpath 20 - the Chilterns Way - to the east of the site and Footpath 91 through the centre of the site and 'major adverse' effects on Footpath 20 adjacent to the site's northern border). The proposals would also have 'moderate adverse' effects on a number of Category B ('Moderate') trees young plantation and 'minor adverse' effects on some mature Category C trees and young plantation.
- 6.9.3 The new construction site and subsequent built development and open space would be relatively limited in views from the wider area, other than the elevated hillside to the south. Significant ('moderate adverse') effects would be felt by residents living immediately adjacent to the site boundaries including Campion Road, Furze Road, Lindlings, Musk Hill to the south-east; Broom Hill, Rowcroft and Long Chaulden to the east; Newlands Road, The Meadows, The Avenue, Poppy Close and Squirrel Chase to the north-east and Pouchen End to the west. Further to the south-west, residents of Box Lane and Felden have more distant views to the southern parts of the site and could also experience potential 'moderate adverse' effects on their visual amenity.
- 6.9.4 Other visual receptors that could experience potential significant effects are the recreational users of the footpaths within the site (see paragraph 6.9.2), walkers on the Grand Union Canal towpath to the south of the site, users of the Hertfordshire Way and Little Hay Golf Complex to the south west of the site, walkers at Westbrook Hay to the south and walkers at Sheethangers Common to the south.

Residual Landscape and Visual Effects

- 6.9.5 The assessment of residual effects takes into account the additional mitigation measures provided by significant amounts of native tree and shrub planting and extensive areas of native grassland which will strengthen landscape character of the site as well as visually integrate new buildings with the landscape. The new planting will make a significant difference to the landscape effects of the development and after 15 years it will be sufficiently tall to provide good screening to the edges of the site where trees have been planted as woodland strips of up to 10m in width. The retention and supplementing of the east-west oriented hedgerows will help the integration of the new buildings with the wider landscape when viewed from the elevated viewpoints to the south.
- 6.9.6 The potential for a new community food growing garden, community orchard and informal play areas within dry attenuation basins will also provide community benefits.
- 6.9.7 The only significant landscape effects will be on the land use on the site, which will see the introduction of 36ha of new buildings and associated infrastructure on land that is currently in agricultural use. The 15.5ha of green infrastructure that will be incorporated within the scheme will be managed so as to achieve a more biodiverse and attractive landscape than that is currently the case, helping to offset the loss. Effects on trees and vegetation will be 'negligible

beneficial' with high quality new trees replacing the lost young plantation and limited number of Category B trees that will be removed to facilitate access off the Long Chaulden entrance.

- 6.9.8 The scheme will have moderate beneficial effects on the existing footpaths that run through the site, resurfacing them to enhance accessibility. Whilst the setting of the paths will change significantly, the new views need not be of lower quality than the existing views. All will include parks or green infrastructure with trees in the foreground and the frontages of proposed housing beyond.
- 6.9.9 With regards to residual visual impact, views from the north and east will generally be well screened by existing and proposed vegetation around the site boundaries. The main significant adverse visual effects will be on views from the elevated recreational areas to the south of the site, where the southern and central parts of the development will form a clear element within a wider panoramic view. These views, from Little Hay Golf Complex and Westbrook Hay, already include a relatively extensive area of Hemel Hempstead as well as some elements of transport infrastructure associated with the A41 and West Coast Mainline and the proposed development will therefore appear as a sympathetic extension to existing housing in Chaulden and Warner's End. Overall the residual adverse effects here will be 'moderate adverse'. Residents on the eastern side of Pouchen End and within Middle Hill may also experience 'moderate adverse' effects with views of new housing beyond their rear gardens.
- 6.9.10 Other residential receptors and road users surrounding the site boundaries will benefit from more extensive areas of planting between their properties and new housing, within new green corridors, retained mature hedgerows and the new Pouchen Park. These visual receptors, including residents of Campion Road, Furze Road, Lindlings, Musk Hill, Broom Hill, Rowcroft and Long Chaulden, will generally experience 'neutral' visual effects, where views will obviously change but not for the better or worse. Some receptors in these areas may have clearer views of the new housing and may experience occasional 'minor adverse' effects. Residents immediately to the north-east of the site, including Newlands Road, The Meadows, The Avenue, Poppy Close and Squirrel Chase will generally benefit from the existing screening provided by the mature trees adjacent to both sides of Footpath 20 (Chiltern Way), however where there are glimpses into the site, at the new access off The Avenue for example, effects will be 'minor adverse' only.
- 6.9.11 No cumulative landscape or visual effects are anticipated.

6.10 Summary

For the valued landscape and visual receptors which have been identified in this chapter, the potential impact of the proposed development on these receptors, the proposed mitigation and resulting residual impacts are summarised in Table 6.23 below.

Table 6.23 Summary

Receptor	Extent	Effect	Mitigation/ Enhancement measures	Residual Effect
CONSTRUCTION (ALL EFFECTS ARE ADVERSE, TEMPORARY AND LOCAL UNLESS OTHERWISE STATED)				
Landscape Receptors				
Designations				
Chilterns AONB	Medium scale	Indirect negligible adverse	None	Indirect negligible adverse
Landscape Character Areas				
NCA 110 Chilterns	Medium scale	Minor adverse	None	Minor adverse
Lower Bulbourne Valley	Medium scale	Moderate adverse	None	Minor adverse
Little Heaths Uplands	Site setting	Moderate adverse	None	Minor adverse
Landscape Features				
Site landform	Site level	Moderate adverse	None	Moderate adverse
Site land-use	Site level	Moderate adverse	None	Moderate adverse
Footpath 20 (Chiltern Way)	Site setting	Indirect Moderate adverse	None	Indirect Moderate adverse
Footpath 21	Site level	Indirect Major adverse	None	Indirect Major adverse
Footpath 91	Site level	Indirect Moderate adverse	None	Indirect Moderate adverse
Site trees: Category A	Site level	No change	None	No change
Site trees: Category B	Site level	Moderate adverse	None	Moderate adverse
Site trees: Category C & unclassified	Site level	Moderate adverse	None	Moderate adverse
Visual Receptors				
Users of Footpath 21 adjacent to northern boundary of site	Site level	Major adverse	None	Major adverse
Users of Footpath 91 connecting Pouchen End Lane with Chaulden	Site level	Moderate adverse	None	Moderate adverse

Receptor	Extent	Effect	Mitigation/ Enhancement measures	Residual Effect
From the Chiltern Way adjacent to the site's eastern boundary.	Site level	Major adverse	None	Major adverse
Users of Pouchen End Lane to the north of the site	Site setting	Moderate adverse	None	Moderate adverse
Users of Pouchen End Lane to west of site	Site setting	Moderate adverse	None	Moderate adverse
Residents of eastern side of Pouchen End	Site setting	Major - Moderate adverse	None	Major - Moderate adverse
Users of Chaulden Lane	Site setting	Moderate adverse	None	Moderate adverse
Users of Little Hay Golf Complex, including Hertfordshire Way	Medium extents	Moderate adverse	None	Moderate adverse
Train users on West Coast Mainline route to south of site	Medium extents	Moderate adverse	None	Moderate adverse
Walkers on short stretch of Grand Union Canal Walk to south-east of site	Medium extents	Moderate adverse	None	Moderate adverse
Users of the A4251 London Road to south of site	Limited extents	Minor adverse	None	Minor adverse
Walkers at Westbrook Hay	Medium extents	Minor adverse	None	Minor adverse
Walkers at Sheethanger Common	Limited extents	Moderate adverse	None	Moderate adverse
Residents of Felden and Box Lane areas	Limited extents	Moderate adverse	None	Moderate adverse
Users of the A41 close to Apsley	Limited extents	Negligible adverse	None	Negligible adverse
Residents of Campion Road, Furze Road, Lindlings, Musk Hill adjacent to site boundary	Medium extents	Moderate adverse	None	Moderate adverse
Users of Campion Road, Furze Road, Lindlings, Musk Hill adjacent to site boundary	Medium extents	Minor adverse	None	Minor adverse
Residents of Broom Hill, Rowcroft, Middle Hill adjacent to site boundary	Medium extents	Moderate adverse	None	Moderate adverse
Users of Broom Hill, Rowcroft, Middle Hill adjacent to site boundary	Medium extents	Minor adverse	None	Minor adverse
Residents of Long Chaulden adjacent to site boundary	Medium extents	Moderate adverse	None	Moderate adverse
Users of Long Chaulden	Medium extents	Minor adverse	None	Minor adverse
Residents of Newlands Road, The Meadows, The Avenue, Poppy Close & Squirrel Chase adjacent to site boundary	Minor extents – wide extents (at site entrance off The Avenue)	Minor – Moderate adverse	None	Minor – Moderate adverse

Receptor	Extent	Effect	Mitigation/ Enhancement measures	Residual Effect
Users of Newlands Road, The Meadows, The Avenue, Poppy Close & Squirrel Chase	Minor extents – wide extents (at site entrance off The Avenue)	Minor adverse	None	Minor adverse
OPERATION (ALL EFFECTS ADVERSE, PERMANENT AND LOCAL UNLESS OTHERWISE STATED)				
Landscape Receptors				
Landscape Designations				
Chilterns AONB	Medium scale	Indirect negligible adverse on setting	The landscape and GI framework will have established however the net benefits will be minimal given the initial negligible magnitude of change.	Indirect negligible adverse on setting
Landscape Character Areas				
NCA 110 Chilterns	Medium scale	Minor adverse	The landscape and GI framework will have established, lessening the magnitude of change.	Negligible adverse
Lower Bulbourne Valley	Medium scale	Moderate adverse	The landscape and GI framework will have established, lessening the magnitude of change.	Minor adverse
Little Heaths Uplands	Site setting	Moderate adverse	The landscape and GI framework will have established, lessening the magnitude of change.	Minor adverse
Landscape Features				
Site landform	Site level	Moderate adverse	The landscape and GI framework will have established, helping to screen changes in levels	Minor adverse
Site land-use	Site level	Moderate adverse	N/A	Moderate adverse
Footpath 20 (Chiltern Way)	Site setting	Moderate beneficial effect on hedgerow management & path surfacing. Moderate adverse effect on setting.	The landscape and GI framework will have established, enhancing effects on the setting of the path.	Moderate beneficial effect on hedgerow management & path surfacing. Neutral effect on setting.
Footpath 21	Site level	Moderate beneficial effect on path surfacing. Major adverse effect on setting.	The landscape and GI framework will have established, enhancing effects on the setting of the path.	Moderate beneficial effect on hedgerow management & path surfacing. Indirect neutral effect on setting.
Footpath 91	Site level	Moderate beneficial effect on path surfacing. Indirect Moderate adverse effect on setting.	The landscape and GI framework will have established, enhancing effects on the setting of the path.	Moderate beneficial effect on path surfacing. Neutral effect on setting.

Receptor	Extent	Effect	Mitigation/ Enhancement measures	Residual Effect
Site trees: Category A	Site level	No change	The landscape and GI framework will have established, lessening the magnitude of change.	No change
Site trees and hedgerows: Category B	Site level	Moderate adverse	The landscape and GI framework will have established, lessening the magnitude of change.	Negligible beneficial
Site trees and hedgerows: Category C	Site level	Moderate adverse	The landscape and GI framework will have established, lessening the magnitude of change.	Neutral
Visual Receptors				
Users of Footpath 21 adjacent to northern boundary of site	Site level	Major adverse	The landscape and GI framework will have established, lessening the magnitude of change.	Neutral
Users of Footpath 91 connecting Pouchen End Lane with Chaulden	Site level	Moderate adverse	The landscape and GI framework will have established, lessening the magnitude of change.	Neutral
From Footpath 20 (Chiltern Way) adjacent to the site's eastern boundary	Site level	Major adverse	The landscape and GI framework will have established, lessening the magnitude of change.	Neutral
Users of Pouchen End Lane to the north of the site	Site setting	Moderate adverse	The landscape and GI framework will have established, lessening the magnitude of change.	Neutral
Users of Pouchen End Lane to west of site	Site setting	Moderate adverse	The landscape and GI framework will have established, lessening the magnitude of change.	Neutral
Residents of eastern side of Pouchen End	Site setting	Major - Moderate adverse	The landscape and GI framework will have established, lessening the magnitude of change.	Neutral – Low adverse
Users of Chaulden Lane	Site setting	Moderate adverse	The landscape and GI framework will have established, lessening the magnitude of change.	Minor adverse
Users of Little Hay Golf Complex, including Hertfordshire Way	Medium extents	Moderate adverse	The landscape and GI framework will have established, lessening the magnitude of change.	Moderate adverse
Train users on short stretch of West Coast Mainline route to south of site	Medium extents	Minor adverse	The landscape and GI framework will have established, lessening the magnitude of change.	Minor adverse
Walkers on short stretch of Grand Union Canal Walk to south-east of site	Medium extents	Moderate adverse	The landscape and GI framework will have established, lessening the magnitude of change.	Minor adverse
Users of the A4251 London Road to south of site	Limited extents	Minor adverse	The landscape and GI framework will have established, lessening the magnitude of change.	Negligible adverse
Walkers at Westbrook Hay	Medium extents	Moderate adverse	The landscape and GI framework will have established, lessening the magnitude of change.	Moderate adverse

Receptor	Extent	Effect	Mitigation/ Enhancement measures	Residual Effect
Walkers at Sheethanger Common	Limited extents	Moderate adverse	The landscape and GI framework will have established, lessening the magnitude of change.	Minor adverse
Residents of Felden and Box Lane areas	Limited extents	Moderate adverse	The landscape and GI framework will have established, lessening the magnitude of change.	Minor adverse
Users of the A41 close to Apsley	Limited extents	Negligible adverse	The landscape and GI framework will have established, lessening the magnitude of change.	Negligible adverse
Residents of Campion Road, Furze Road, Lindlings, Musk Hill adjacent to site boundary	Medium extents	Moderate adverse	The landscape and GI framework will have established, lessening the magnitude of change.	Neutral
Users of Campion Road, Furze Road, Lindlings, Musk Hill adjacent to site boundary	Medium extents	Minor adverse	The landscape and GI framework will have established, lessening the magnitude of change.	Neutral
Residents of Broom Hill, Rowcroft, Middle Hill adjacent to site boundary	Medium extents	Moderate adverse	The landscape and GI framework will have established, lessening the magnitude of change.	Neutral - Minor adverse
Users of Broom Hill, Rowcroft, Middle Hill adjacent to site boundary	Medium extents	Minor adverse	The landscape and GI framework will have established, lessening the magnitude of change.	Neutral - Minor adverse
Residents of Long Chaulden adjacent to site boundary	Medium extents	Moderate adverse	The landscape and GI framework will have established, lessening the magnitude of change.	Neutral
Users of Long Chaulden	Medium extents	Minor adverse	The landscape and GI framework will have established, lessening the magnitude of change.	Neutral
Residents of Newlands Road, The Meadows, The Avenue, Poppy Close & Squirrel Chase adjacent to site boundary	Minor extents – wide extents (at site entrance off The Avenue)	Minor – Moderate adverse	The landscape and GI framework will have established, lessening the magnitude of change.	Neutral - Minor adverse (site entrance)
Users of Newlands Road, The Meadows, The Avenue, Poppy Close & Squirrel Chase	Minor extents – wide extents (at site entrance off The Avenue)	Minor adverse	The landscape and GI framework will have established, lessening the magnitude of change.	Neutral - Minor adverse (site entrance)
Cumulative Effect				
There would only be limited construction or operational effects, with none of these being at a significant level.				