

Site Assessment Study for Dacorum Borough Council

Volume 1: Main Report

January 2020

Quality information

Prepared by

Charlotte Simpson
Senior Planner

Stephanie Brewer
Associate Planner

Checked by

Jesse Honey
Associate

Verified by

Jesse Honey
Associate

Approved by

Ben Castell
Director

Revision History

Revision	Revision date	Details	Authorised	Name	Position
v1	15/03/2019	Draft final	BC	Ben Castell	Technical Director
v2	01/06/2019	Final draft	BC	Ben Castell	Technical Director
v3	11/10/2019	Draft final report	BC	Ben Castell	Technical Director
v4	10/01/2020	Final report	BC	Ben Castell	Technical Director

Prepared for:

Dacorum Borough Council

Prepared by:

AECOM Infrastructure & Environment UK Limited

Aldgate Tower

2 Leman Street

London E1 8FA

United Kingdom

aecom.com

© 2020 AECOM Infrastructure & Environment UK Limited. All Rights Reserved.

This document has been prepared by AECOM Infrastructure & Environment UK Limited ("AECOM") for sole use of our client (the "Client") in accordance with generally accepted consultancy principles, the budget for fees and the terms of reference agreed between AECOM and the Client. Any information provided by third parties and referred to herein has not been checked or verified by AECOM, unless otherwise expressly stated in the document. No third party may rely upon this document without the prior and express written agreement of AECOM.

Disclaimer

This document is intended to aid the preparation of the Dacorum Borough Local Plan and can be used to guide decision making and as evidence to support Plan policies to the extent Dacorum Borough Council chooses to do so. It forms part of the evidence base but is not a Local Plan policy document. It was developed by AECOM and HDH based on the evidence and data reasonably available at the time of assessment, and therefore has the potential to become superseded by more recent information. Dacorum Borough Council is not bound to accept its conclusions. Each site has been assessed in a consistent manner using the agreed methodology. Where evidence or developments subsequent to this study conflict with its conclusions, the Borough Council should decide what policy position to take in the Local Plan and that judgement documented so that it can be defended at Examination.

Table of Contents

List of acronyms and abbreviations used in text	5
Executive Summary	7
1. Introduction	14
2. Approach.....	16
3. Policy and Evidence Base Review	23
4. Identified Sites for Assessment	25
5. Phase 1 Assessment.....	29
6. Phase 2 Assessment.....	34
7. Viability and Deliverability.....	40
8. Conclusions and Next Steps	50
Appendix A - Summary table of assessment results for all sites.....	55
Appendix B - Detailed policy and evidence base review	75
Appendix C - Infrastructure standards currently used by Dacorum for planning purposes	95

List of acronyms and abbreviations used in text

Acronym	Meaning
AMR	Annual Monitoring Report
AONB	Area of Outstanding Natural Beauty
BAP	Biodiversity Action Plan
BCIS	Building Cost Information Service
BFI	British Film Institute
BLV	Benchmark Land Value
CAONB	Chilterns Area of Outstanding Natural Beauty
CCG	Clinical Commissioning Group
CIL	Community Infrastructure Levy
DBC	Dacorum Borough Council
DLCA	Dacorum Landscape Character Assessment
DPD	Development Plan Document
DPH	Dwellings per Hectare
EA	Environment Agency
EiP	Examination in Public
ELAA	Employment Land Availability Analysis
EPC	Energy Performance Certificate
EUV(+)	Existing Use Value (Plus)
FRA	Flood Risk Assessment
GDV	Gross Development Value
GI	Green Infrastructure
GIA	Gross Internal Area
GIS	Geographic Information System
GLA	Greater London Authority
GP	General Practitioner
Ha.	Hectares
HCC	Hertfordshire County Council
HIPF	Hertfordshire Infrastructure and Funding Prospectus
HUDU	Healthy Urban Development Unit
IDP	Infrastructure Delivery Plan
IMD	Indices of Multiple Deprivation
LCA	Landscape Character Assessment
LDS	Local Development Scheme
LEP	Local Enterprise Partnership
LPA	Local Planning Authority
MDS	Major Development Site
MHCLG	Ministry of Housing, Communities and Local Government
NDSS	Nationally Described Space Standard
NHLE	National Heritage List for England
NHS	National Health Service
NPPF	National Planning Policy Framework
OAN	Objectively Assessed Need
PDL	Previously Developed Land
PINS	The Planning Inspectorate
PPG	Planning Practice Guidance

Acronym	Meaning
RICS	Royal institute of Chartered Surveyors
RP	Registered Provider
s106	Section 106
SA	Sustainability Appraisal
SAC	Special Area of Conservation
SEP	Strategic Economic Plan
SFRA	Strategic Flood Risk Assessment
SHLAA	Strategic Housing Land Availability Assessment
SHMA	Strategic Housing Market Assessment
SHOP	Strategic Housing for Older People
SINC	Site of Importance for Nature Conservation
SPA	Special Protection Area
SPD	Supplementary Planning Document
SPZ	Source Protection Zone
Sq. m	Square Metre
SSSI	Site of Special Scientific Interest
TPO	Tree Protection Order
WCML	West Coast Main Line
WwTW	Waste water Treatment Works

Executive Summary

Study context

In September 2018, Dacorum Borough Council (henceforth DBC) commissioned town planning consultants AECOM and viability specialists HDH to prepare a Site Assessment Study. This is the final report of that study. The study forms part of the evidence base for the emerging Dacorum Borough Local Plan.

Strong pressure for growth means that Dacorum has a significant objectively assessed need (OAN) for housing and employment land. Both need to be accommodated through urban capacity and sites allocated in the emerging Dacorum Borough Local Plan in a way which does not compromise the borough's other sustainability objectives. The emerging Local Plan aims to meet Dacorum's development needs up to 2036.

Study objectives

The key objective of this Site Assessment study is to assist in the decision-making process on which sites to allocate for housing and employment in the emerging Local Plan. It does not itself decide which sites are to be allocated; this is a decision that can only be made by DBC as the democratically-elected planning authority for its area.

Key study principles

DBC have identified 144 sites for residential or employment development that need to be assessed through this exercise. Each of these sites needs to be assigned to one of three categories, depending on its suitability, availability and achievability: 'potentially suitable for allocation with minor constraints', 'potentially suitable for allocation with major constraints' or 'not suitable for allocation'. 'Potentially suitable' sites are considered developable, subject to identified constraints being mitigated.

Some sites within the 144 were filtered out as unsuitable for allocation before the more detailed assessment of site suitability. They include sites that:

- are less than 0.3 hectares in size (considered minor development and as such not suitable for allocation by the local authority);
- could be merged with other sites for any reason;
- overlap 100% with other sites, and/or;
- were granted planning permission or were already allocated, either after being submitted to the Council or after this study began.

Each site's suitability, availability and achievability were determined in the light of its performance against standard criteria derived from and measured against national policy, having regard to the unique local characteristics of the borough.

It is important to recognise that there can be no such thing as an entirely quantitative site assessment. The study, like all other site assessments, needs to make qualitative judgements of site suitability on some 'softer' criteria such as landscape and heritage.

Assessors have sought to maximise the defensibility of such assessment through having appropriate regard to relevant national and local policy and evidence, including, where applicable, relevant precedents and/or case law. The study thereby seeks to ensure that other appropriately qualified parties replicating the assessment exercise would come to the same, or substantially similar, conclusions.

While the study considers multiple locations for housing and employment growth, it does not necessarily follow or imply that development of some or all of these sites will take place, or that development at these locations is definitively supported by DBC.

Although the focus of this assessment exercise is on land outside existing built up areas and/or settlement boundaries in Dacorum, it is only one part of the Local Plan evidence base on suitable, available and achievable land for development. Urban sites, whether infill or redevelopment opportunities, still have an important role to play and the fact that this exercise focusses only on land outside existing urban areas should not be considered to supersede the important role of brownfield regeneration in sustainable development.

As a final point, it is important to remember at all times that any site assessment exercise, no matter how comprehensive, can only ever be a snapshot in time.

Study methodology

The detailed assessment of all sites across all relevant criteria took place in two phases.

Phase 1 assessment

Phase 1 was the first 'sift' of sites, comprising a high-level desktop assessment of the most intrinsic, or fundamental constraints. These reflect key locally and/or nationally identified physical or policy constraints.

Where sites were found to have key policy or physical constraints that could not be mitigated, which rendered them clearly unsuitable for either residential or employment development, they were filtered out of further assessment at that point.

In cases where part of the site remained developable, for example if only some of it fell into Flood Zone 3, this was recorded, and a recommendation made to adjust site boundaries if it would enable the site to proceed to the next phase of assessment.

For each site considered unsuitable through the Phase 1 assessment, a justification is provided based on relevant policy or evidence. This part of the assessment was carried out by planning policy specialists, consulting other technical specialists as and when required (see Phase 2 below for details).

Phase 2 assessment

The remaining sites were subject to more detailed analysis through **Phase 2**. This categorised each site either as unsuitable for allocation or suitable for allocation but with minor or major constraints, depending on its performance across a range of criteria.

For Phase 2, technical specialists joined the planners from Phase 1 in carrying out the assessment. These specialists included transport planners, flood specialists, geo-technical assessors, heritage specialists, landscape specialists, economists and ecologists. Although wider in scope than Phase 1, Phase 2 was designed to be consistent with it in terms of format, including a clear justification of conclusions. This part of the assessment included no scoring or weighting of criteria. As such, the final decision on suitability for each site took into account its performance in the round across all thirteen assessment criteria used in the site capacity assessment process, as set out below.

- Assessment Criterion 1- Transport and Accessibility
- Assessment Criterion 2- Flood Risk
- Assessment Criterion 3- Green Belt
- Assessment Criterion 4- Geo-environmental
- Assessment Criterion 5- Agricultural Land Quality
- Assessment Criterion 6-Land Uses- both Existing and Neighbouring

- Assessment Criterion 7- Potential for Mix of Housing Types
- Assessment Criterion 8- Heritage
- Assessment Criterion 9- Local Landscape and Visual Impact
- Assessment Criterion 10- Regeneration Potential
- Assessment Criterion 11- Economic Development Potential
- Assessment Criterion 12- Environmental Impact
- Assessment Criterion 13- Spatial Opportunities and Constraints

Site capacity and densities

Sites up to 15 hectares

A design case study approach was applied to all residential, employment and mixed-use sites under 15 hectares to determine capacity based on net density. A design case study approach entails developing an appropriate range of high-level/concept masterplans for a selection of representative sites and then determining which of the case studies is most applicable to each of all sites being assessed. It also informs the mix of different types and sizes of housing that is achievable on each site. The design case studies applied the existing infrastructure standards used by the Borough Council in adopted Local Plan policy, which are set out in Appendix C.

Sites larger than 15 hectares

A slightly different approach was required for the very largest sites, reflecting the additional land-take required for non-residential development at these larger scales, i.e. moving from the net densities of the design case studies to the gross densities needed for realistic assessment at a larger scale.

AECOM's approach took into account sites over 15 hectares in the Dacorum Site Allocations DPD Masterplans, as well as the existing densities of Dacorum's main settlements, and finally to existing masterplans being progressed by AECOM elsewhere in the South East of England at a town-wide scale. This suggests that it would be appropriate and reasonable to assume a gross density of 17.5 dwellings per hectare for the capacity of sites over fifteen hectares within this study.

Policy and Evidence Base Review

As part of the study, AECOM reviewed relevant provisions of national and local policy and evidence base documents that together form the context for planning at Dacorum at the time of writing. Unless otherwise stated, the baseline for all information, data, evidence and policy reviewed and/or referenced in this report comprised the evidence available on the Dacorum borough website at October 2018, and other relevant sources (for example, Google Maps and Google Earth), with some limited additional material and updates added at the time of finalising the report during 2019.

A number of site submissions considered in this assessment were supported by their own developer-commissioned technical evidence. While this evidence can help inform the understanding of the constraints and opportunities affecting sites, DBC and AECOM agreed that it was better that the study come to its own conclusions on technical suitability and achievability in order to ensure all sites were appraised in an independent and consistent manner.

The detailed findings of the policy review are extensive and have therefore been set out in Appendix B and listed in order of topic area, for ease of reference.

Identified sites

The first and most obvious filtering exercise that needed to be applied to the 144 sites initially provided to AECOM was to eliminate sites outside the scope of the study. This filtering has no relationship to the suitability or otherwise of these sites for residential or employment development.

In total, 27 sites were filtered out entirely or merged with others due to their proximity, landownership and/or similarities with larger neighbouring sites. Following this merging exercise, the remaining 117 sites were taken forward to Phases 1 and 2 assessment.

Phase 1 Assessment

In total, out of the remaining pool of 117 sites, the Phase 1 Assessment indicates that 38 are wholly unsuitable for allocation and one site is partially unsuitable for allocation. The remaining 79 sites (including the potentially suitable portion of the one deemed partially unsuitable) were carried forward for Phase 2 assessment.

Phase 2 Assessment

The detailed results of the Phase 2 assessment are extensive, covering thirteen criteria for each of seventy-nine sites, with a total of over a thousand individual assessments. As such, full assessment results are set out in Volume 3 of this study.

As a result of the Phase 2 assessment, 33 sites were considered not suitable for allocation, and 46 sites were considered potentially suitable, of which 34 had major constraints and 12 minor constraints.

Recognising the importance of providing DBC with as wide as possible a range of potentially suitable locations for growth, an inclusive approach was taken. This means that where boundary amendments have the potential to improve a site's performance against the assessment criteria, these have been recommended.

In other words, in some cases, a larger site will have been assessed either as not suitable for allocation or suitable but with major constraints. However, a smaller part of the site has the potential to be suitable for allocation.

In total, of the 46 sites considered potentially suitable for allocation at this stage, fifteen of them have been recommended for boundary amendments- two of which are, exceptionally, boundary increases rather than decreases.

All sites and the stage at which they were filtered out of considered or accepted as suitable for allocation, are listed in Appendix A, which acts in part as an at-a-glance summary of Volume 3.

Viability and Deliverability

A viability and deliverability assessment forms Volume 4 of the Dacorum Site Assessment Study; a non-technical summary of Volume 4 forms Chapter 7 of this volume. The assessment was carried out in a way consistent with national policy and guidance and also aligns with Royal Institute of Chartered Surveyors (RICS) best practice.

Across the Borough, the Residual Value exceeds the Benchmark Land Value (BLV), indicating that sites are likely to be viable. The exception is in relation to case studies of brownfield land in two lower value zones (CIL Zone 2 and CIL Zone 3) as well as one further typology in Zone 2. This is for two reasons; firstly, the costs associated with brownfield sites are greater, and, secondly, the BLV for the further typology is based on an industrial use, which is higher than for greenfield sites.

We would suggest that the Council is cautious about allocating such sites in the Local Plan without further viability work to confirm deliverability. For this reason, it would be prudent for

the Council to engage with relevant developers and landowners before relying on these sites to deliver housing in the short to medium term.

The analysis indicates that, on the whole, there is capacity for substantial developer contributions toward both site-specific and Borough-wide infrastructure, the exception being the brownfield sites where the capacity is less.

A set of development financial appraisals has also been run for land for employment use. To a large extent, the results of the analysis are reflective of the current market in the Borough, and more widely. Whilst office development is not shown as viable, it is nevertheless coming forward on the ground. Similarly, industrial development is shown as being unviable. However, the national guidance that is followed by the assessment does not necessarily reflect the broad range of business models under which developers and landowners operate.

The Council can be confident that greenfield sites are most likely to be deliverable and have capacity to bear developer contributions over and above CIL. The viability of brownfield sites is less certain, particularly in the lower value areas. The Council should be cautious before allocating these.

The larger sites have capacity to bear developer contributions (s106 and CIL) of over £40,000/unit. In due course, with further work to establish the strategic infrastructure and mitigation requirements of the larger sites, it is recommended that further consideration be given as to how developer contributions are best collected – through the s106 regime or under CIL.

Conclusions and Next Steps

This site assessment study comprises an independent, impartial and technically-focussed appraisal of the suitability, availability and achievability of 144 sites submitted to Dacorum Borough Council at various points in recent years for residential or employment development. Conclusions on site suitability have been reached on the basis of high-quality evidence from a range of sources, alongside professional knowledge, experience and judgement.

The results of the study, which comprises part of the Borough's evidence base rather than planning policy, will inform Dacorum's decisions on site allocations and housing supply in the forthcoming Local Plan.

The total land area considered potentially suitable for residential or employment allocation comprises 776.14 hectares, collectively offering the potential for 15,192 new dwellings and 6,000 square metres of new employment space. This potential can be broken down further by category and by settlement, as illustrated in the tables overleaf.

Capacity of land potentially suitable for allocation across Dacorum

	Land potentially suitable for allocation with minor constraints	Land potentially suitable for allocation with major constraints	Total land potentially suitable for allocation
Residential development (dwellings)	1,586	13,606	15,192
Employment development (square metres)	6,000	0 ¹	6,000

Source: AECOM calculations

Capacity of land potentially suitable for allocation across Dacorum (by settlement)

	Land potentially suitable for allocation with minor constraints (dwellings except where stated)	Land potentially suitable for allocation with major constraints (dwellings)	Total land potentially suitable for allocation (dwellings except where stated)	Percentage of total capacity by settlement (dwellings except where stated)
Hemel Hempstead	12	7,460	7,472	49.18%
Berkhamsted	760	2,111	2,871	18.90%
Tring	367	2,420	2,787	18.35%
Bourne End	6000 sq. m employment floorspace	0	0	0% (100% of employment capacity)
Bovingdon	333	146	479	3.36%
Chipperfield	0	0	0	0%
Flamstead	0	0	0	0%
Great Gaddesden	0	21	21	0.14%
Kings Langley	698	522	1,220	8.20%
Long Marston	12	0	12	0.08%
Markyate	0	170	170	1.12%
Potten End	0	0	0	0%
Wilstone	57	46	103	0.68%

Source: AECOM calculations

¹ Note that this does not mean there is no capacity for employment development on land potentially suitable for allocation with major constraints- there is, for example in large-scale urban extensions that have been assessed at a 'town-wide' density of 17.5 dwellings per hectare. It simply means there are no sites in this category suitable for employment development only.

There are a number of potential next steps arising from this study. The first and most obvious is for Dacorum Borough Council to use its conclusions to assist in the decision-making process for which sites to allocate for residential and/or employment development in the emerging Local Plan.

The decision on site allocations will then be subject to a publicity period (known as a Regulation 19 Consultation) on the Local Plan. At this stage, the Council considers the Local Plan evidence to be robust and soundly based and as such it is not expected to be subject to another round of updates/amendments before the Local Plan Examination in Public.

It should also be noted that while the site assessment exercise considered transport data from a range of relevant sources, detailed transport modelling of its conclusions has not been carried out.

Decisions on which sites to allocate in the Local Plan should be informed by careful consideration of site phasing, itself informed by the evidence presented in this study. In so doing, the Council will aim to develop a realistic trajectory for housing supply over the Plan period which is able to meet Dacorum's Objectively Assessed Need (OAN), in appropriate consultation with infrastructure providers.

1. Introduction

1.1. Study context

1. In September 2018, Dacorum Borough Council (henceforth DBC) commissioned town planning consultants AECOM and viability specialists HDH to prepare a Site Assessment Study. This is the final report of that study.
2. The study forms part of the evidence base for the emerging Dacorum Borough Local Plan. It follows on from and consolidates a number of previous site assessment exercises commissioned by the Council, including the 2015 Strategic Housing Land Availability Assessment (SHLAA), which was also prepared by AECOM and HDH.
3. Located in Hertfordshire, relatively close to London, Dacorum Borough faces a range of planning and development challenges associated with its location. These include strong pressure for residential and employment growth that are features of the relatively buoyant local economy, which need to be balanced with extensive and strict strategic constraints to that growth, most notably the Chilterns Area of Outstanding Natural Beauty (AONB)² and the Metropolitan Green Belt.
4. Although the post-war New Town of Hemel Hempstead is by far the largest settlement in Dacorum, other key settlements, including Berkhamsted and Tring, also experience strong pressures for growth, due to their strong quality of place. The Borough's rural area also encompasses a number of smaller villages and hamlets.
5. The strong pressure for growth means that Dacorum has a significant objectively assessed need (OAN) for housing and employment land. Both need to be accommodated through urban capacity and sites allocated in the emerging Dacorum Borough Local Plan in a way which does not compromise the borough's other sustainability objectives. The emerging Local Plan aims to meet Dacorum's development needs up to 2036.

1.2. Study objectives

6. The key objective of this Site Assessment study is to assist in the decision-making process on which sites to allocate for housing and employment in the emerging Local Plan. It does not itself decide which sites are to be allocated; this is a decision that can only be made by DBC as the democratically-elected planning authority for its area.
7. In order to maximise its value in informing DBC's approach to allocating sites, AECOM and DBC have ensured that this study is:
 - Impartial, objective and defensible in the face of challenge;
 - Underpinned by robust and proportionate evidence – where necessary, identifying and addressing evidence gaps or inaccuracies;
 - Technical evidence rather than consultation evidence (the latter comprising the views of the local community, landowners and other stakeholders, such as the County Council, Environment Agency, Natural England, Historic England and key infrastructure providers) – however, both are important and will be brought together by DBC as it makes final decisions on allocation. As such, study conclusions were not swayed by non-technical/political views and opinions;

² <https://www.chilternsaonb.org/>

- Accurate and adding value to existing studies - referencing and building on relevant elements of the existing and available emerging Local Plan evidence base, where appropriate, and local and national policy;
 - Comprehensive, bringing together specialists from a range of disciplines including planning policy, masterplanning, urban design, heritage, flood risk, geotechnical constraints, landscape assessment, economics, transport and infrastructure planning; and
 - Cross-referenced to linked work DBC is carrying out on urban capacity (“the urban SHLAA”) to understand the full quantum of housing land potentially available over the lifetime of the Plan.
8. Although this study is not a Strategic Housing Land Availability Assessment (SHLAA) in the sense that there was no need to carry out another Call for Sites and its scope is limited to land outside existing settlement boundaries, it shares key objectives with the SHLAA process and could be considered a rural counterpart to the urban SHLAA work. The most obvious similarity is that, like a SHLAA, the key study objective is to determine the suitability, availability and achievability of all sites.³

1.3. Report structure

9. Following this introductory chapter, the remainder of this report is structured as follows:
- **Chapter 2: Approach** sets out the project’s approach and methodology;
 - **Chapter 3: Policy and Evidence Review** describes how key policy and evidence sources were analysed to inform the project’s approach and conclusions;
 - **Chapter 4: Identified Sites for Assessment** introduces all the sites to be assessed;
 - **Chapter 5: Phase 1 Site Assessment** comprises the ‘first sift’ of sites into two pools, those considered least suitable, and those that are more suitable;
 - **Chapter 6: Phase 2 Site Assessment** takes the sites considered more suitable in Chapter 5 and sifts them further by suitability - it also considers site availability;
 - **Chapter 7: Viability and Deliverability Assessment** summarises the approach and results of the HDH viability and deliverability assessment carried out on Phase 2 sites;
 - **Chapter 8: Conclusions and Recommendations** sets out the final conclusions and recommendations for all sites, based on all stages of analysis.
 - **Appendix A** comprises an at-a-glance summary of suitability conclusions by site across all sites assessed;
 - **Appendix B** sets out the detailed findings of the policy and evidence review outlined in Chapter 3; and
 - **Appendix C** sets out the infrastructure standards that are used by Dacorum currently, and which were applied to the design case studies that were used to ascertain all site capacities.

³ The definitions of ‘suitability’, ‘availability’ and ‘achievability’ for the purposes of site assessment can be found in the Government’s online Planning Practice Guidance at <https://www.gov.uk/guidance/housing-and-economic-land-availability-assessment>

2. Approach

2.1. Introduction

10. The purpose of this chapter is to explain how the study meets the key objectives set out in Chapter 1: Introduction. The chapter first provides further detail on the study's general approach and then sets out a detailed methodology for assessment of the suitability, availability and achievability of all sites.

2.2. Key study principles

11. DBC have identified 144 sites that need to be assessed through this exercise. Each of these sites needs to be assigned to one of three categories, depending on its suitability, availability and achievability: 'potentially suitable for allocation with minor constraints', 'potentially suitable for allocation with major constraints' or 'not suitable for allocation'. 'Potentially suitable' sites are considered developable, subject to identified constraints being mitigated.
12. Sites assessed as having major constraints may still need further work to show how those constraints will be mitigated before they can be considered fully suitable for allocation.
13. Some sites within the 144 were filtered out as unsuitable for allocation before the more detailed assessment of site suitability. They include sites that:
 - are less than 0.3 hectares in size (considered minor development and as such not suitable for allocation by the local authority);
 - could be merged with other sites for any reason;
 - overlap 100% with other sites, and/or;
 - were granted planning permission or were already allocated, either after being submitted to the Council or after this study began.
14. Each site's suitability, availability and achievability was determined in the light of its performance against standard criteria derived from and measured against national policy, having regard to the unique local characteristics of the borough. In this sense, the assessment of site suitability is absolute, rather than relative. In other words, it is possible that there could be a category with very few or even no sites within it.
15. It is important to recognise that there can be no such thing as an entirely quantitative site assessment. The study, like all other site assessments, needs to make qualitative judgements of site suitability on some 'softer' criteria such as landscape and heritage.
16. Assessors have sought to maximise the defensibility of such assessment through having appropriate regard to relevant national and local policy and evidence, including, where applicable, relevant precedents and/or case law. The study thereby seeks to ensure that other appropriately qualified parties replicating the assessment exercise would come to the same, or substantially similar, conclusions.
17. All sites are assessed for their potential for residential use, employment use, or mixed-use development including a proportion of each. It is highly probable that of the sites found potentially appropriate for allocation, some are suitable only for residential and others only for employment. All sites to be evaluated are capable of delivering major development.⁴

⁴ The NPPF defines major development as "For housing, development where 10 or more homes will be provided, or the site has an area of 0.5 hectares or more; For non-residential development it means additional floorspace of 1,000m² or more, or a

18. While the study considers multiple locations for housing and employment growth, it does not necessarily follow or imply that development of some or all of these sites will take place, or that development at these locations is definitively supported by DBC. This is consistent with the fact that, as stated in the Introduction, this study is an evidence base document informing the preparation of the new Local Plan rather than policy in its own right.
19. The study does not itself take account of the new emerging Local Plan, its spatial strategy and its strategic policies, options for which will be developed following completion of this study. These will inform the shape, form, and location of future development for the duration of the plan period.
20. Although the focus of this assessment exercise is on land outside existing built up areas and/or settlement boundaries in Dacorum, it is only one part of the Local Plan evidence base on suitable, available and achievable land for development. Urban sites, whether infill or redevelopment opportunities, still have an important role to play and the fact that this exercise focusses only on land outside existing urban areas should not be considered to supersede the important role of brownfield regeneration in sustainable development. DBC will pursue this through subsequent work on the borough's urban capacity, to inform site selection and building an understanding of overall housing supply.
21. Likewise, even where land is outside an existing settlement, it may nevertheless comprise a previously-developed site rather than greenfield development. In such cases, paragraph 79 of the National Planning Policy Framework (NPPF)⁵ supports development which re-uses redundant or disused buildings or involves the subdivision of an existing residential dwelling. NPPF paragraphs 77-79 mention the potential for rural housing development on exception sites with an opportunity to meet local affordable housing needs or to support local services.
22. As a final point, it is important to remember at all times that any site assessment exercise, no matter how comprehensive, can only ever be a snapshot in time. Study conclusions that sites are deliverable or developable are recommendations only; there is no guarantee that DBC will allocate them for housing development, nor that they would be approved if submitted as a planning application. Conversely, the exclusion of a site from this supply does not mean that it could not be developed, providing that the constraints identified could be satisfactorily overcome.

2.3. Study methodology

23. As noted in the Introduction above, the detailed assessment of all sites across all relevant criteria took place in two phases.

Phase 1 assessment

24. Phase 1 was the first 'sift' of sites, comprising a high-level desktop assessment of the most intrinsic, or fundamental constraints. These reflect key locally and/or nationally identified physical or policy constraints.
25. Where sites were found to have key policy or physical constraints that could not be mitigated, which rendered them clearly unsuitable for either residential or employment development, they were filtered out of further assessment at that point.

site of 1 hectare or more, or as otherwise provided in the Town and Country Planning (Development Management Procedure) (England) Order 2015".

⁵ Available online at

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/740441/National_Planning_Policy_Framework_web_accessible_version.pdf

26. In cases where part of the site remained developable, for example if only some of it fell into Flood Zone 3, this was recorded, and a recommendation made to adjust site boundaries if it would enable the site to proceed to the next phase of assessment.
27. To ensure consistency of assessment, sites were considered unsuitable for allocation if they met one or more of the following criteria:
 - Ancient Woodland – any site 75% or more covered with this designation, and with no potential for boundary change;
 - AONB – any site of over 0.5 hectares entirely within the AONB boundary that did not comprise previously-developed land (previously-developed AONB land was carried forward to the next stage of assessment);
 - Flood Zone 3 – any site 75% or more covered with this designation, and with no potential for boundary change;
 - Open countryside – any site not within or adjacent to existing settlement boundaries or smaller settlements and without the potential to be adjacent to a settlement boundary or smaller settlement during the Local Plan period;
 - Rejection in the SHLAA 2016 – any sites rejected as not suitable, available and/or achievable for development in the most recent SHLAA, and where the reasons for rejection still apply;
 - Site of Special Scientific Interest (SSSI) – any site wholly or partially within a SSSI, or which is likely to have an adverse impact on it;
 - Special Area of Conservation (SAC) – any site 75% or more covered with a SAC; and with no potential for boundary change; or
 - Special Protection Area (SPA) – any site 75% or more covered with a SPA with no potential for boundary change.
28. The above criteria are all considered fundamental constraints based on the NPPF presumption of sustainable development, which identifies policies for certain types of protected areas or assets of particular importance as providing a strong reason for restricting development in such locations⁶.
29. For each site considered unsuitable through the Phase 1 assessment, a justification is provided based on relevant policy or evidence. This part of the assessment was carried out by planning policy specialists, consulting other technical specialists as and when required (see Phase 2 below for details).

Phase 2 assessment

30. The remaining sites were subject to more detailed analysis through Phase 2. This categorised each site either as unsuitable for allocation or suitable for allocation but with minor or major constraints, depending on its performance across a range of criteria.
31. For Phase 2, technical specialists joined the planners from Phase 1 in carrying out the assessment. These specialists included transport planners, flood specialists, geo-technical assessors, heritage specialists, landscape specialists, economists and

⁶ See NPPF paragraphs 11 and 176, as well as NPPF footnotes 6 and 63. These include: habitats sites; listed or proposed Ramsar sites; sites identified, or required, as compensatory measures for adverse effects on habitats sites; potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites; sites designated as Sites of Special Scientific Interest; land designated as Green Belt, Local Green Space, an Area of Outstanding Natural Beauty, a National Park (or within the Broads Authority) or defined as Heritage Coast; irreplaceable habitats; designated heritage assets (and other heritage assets of archaeological interest including non-designated heritage assets of archaeological interest, which are demonstrably of equivalent significance to scheduled monuments, and should be considered subject to the policies for designated heritage assets.); and areas at risk of flooding or coastal change.

ecologists. Although wider in scope than Phase 1, Phase 2 was designed to be consistent with it in terms of format, including a clear justification of conclusions. This part of the assessment included no scoring or weighting of criteria. As such, the final decision on suitability for each site took into account its performance in the round across all thirteen assessment criteria used in the site capacity assessment process, as set out below.

Assessment Criterion 1- Transport and Accessibility

- Ensuring safe and satisfactory access can be secured for pedestrians, public transport and private vehicles⁷
- Where the site cannot be accessed other than via third party land, that is not being currently promoted for development, this has been stated in the detailed assessment, and unless evidence exists to the contrary, it is assumed that the site is inaccessible and therefore unsuitable for allocation.
- Reviewing site accessibility to key local facilities, taking into account opportunities and constraints for improving the walking, cycling and public transport network⁸;

Assessment Criterion 2- Flood Risk

- Reviewing flood risk issues in line with the sequential and exception test-based approach set out in NPPF paragraphs 157-159, and considering how these might be mitigated⁹, taking into account flood zone, the extent to which the site is affected by surface water, ground water or reservoir flooding, and the emerging SFRA Level 1;

Assessment Criterion 3- Green Belt

- Assessing the Green Belt impact of potential site allocations, based on the conclusions of the recent Phase 1 and 2 borough Green Belt Review (which in some cases imply that subsequent Phase 3 Green Belt review work may be beneficial)¹⁰;

Assessment Criterion 4- Geo-environmental

- Assessing geological and environmental constraints to new development¹¹ including, for example, made ground, radon, potential sources of contamination, landfilling records, and hydrogeological sensitivity¹²;

Assessment Criterion 5- Agricultural Land Quality

Considering whether the site includes areas of the best and most versatile agricultural land¹³;

Assessment Criterion 6-Land Uses- both Existing and Neighbouring

- Taking into account existing and neighbouring land uses of the site, seeking to minimise conflict and constraints ('bad neighbour' uses) and to maximise opportunities, including from economies of scale, access to nearby infrastructure etc ¹⁴;

Assessment Criterion 7- Potential for Mix of Housing Types

⁷ In line with NPPF paragraph 102.

⁸ As per NPPF paragraph 84.

⁹ See NPPF paragraphs 155-158.

¹⁰ In line with their contribution to the five purposes of Green Belt land set out in NPPF paragraph 134.

¹¹ See NPPF paragraph 178 and mitigation measures as per Building Regulations.

¹² i.e. potential for groundwater contamination as assessed through Environment Agency-designated Source Protection Zones.

¹³ In line with NPPF paragraph 170 and Footnote 53, based on Natural England's Agricultural Land Classification map for London and the South East, available at <http://publications.naturalengland.org.uk/category/5954148537204736>

¹⁴ This criterion is not explicitly referenced in national planning policy but considered consistent with the NPPF principle of sustainable development and specific NPPF requirements such as in paragraph 97 on replacement of facilities such as playing fields lost due to development

- Examining the site's ability to provide for a mix of housing types required to meet current and projected local need, in line with the South West Hertfordshire SHMA and other housing needs assessment exercises (based on site size, neighbouring uses, location with respect to existing and planned infrastructure, the results of the viability assessment etc.)¹⁵;

Assessment Criterion 8- Heritage

- Considering the site's potential for impact on designated heritage assets and their settings¹⁶, including listed buildings, conservation areas, scheduled monuments, registered parks and gardens and registered battlefields, and on areas of archaeological potential;

Assessment Criterion 9- Local Landscape and Visual Impact

- Assessing the sensitivity of the local landscape to development, with reference to the landscape component of the Local Plan evidence base and the findings from AECOM site visits¹⁷, with particular attention to the Chiltern Area of Outstanding Natural Beauty and its setting;

Assessment Criterion 10- Regeneration Potential

- Examining the area's level of deprivation, in line with the indices of multiple deprivation¹⁸, including income deprivation, employment deprivation, health deprivation and disability, education, skills and training deprivation, barriers to housing and services, living environment deprivation, and crime (assuming greater potential for positive effects of development on employment, health, education and other well-being indicators in areas of higher deprivation);

Assessment Criterion 11- Economic Development Potential

- Considering sites in terms of their existing or potential attractiveness to employers, having regard to Census 2011 workplace data on employment; the proximity of existing major employment locations; the Council evidence base on economic development, including future employment projections and sites; sustainability considerations, including the principle that homes should be built close to places of work in order to reduce commuting distances and hence reduce the need to travel;¹⁹ and the economic development impacts of existing and planned transport infrastructure;

Assessment Criterion 12- Environmental Impact

- Assessing environmental considerations, including impact on local wildlife sites and other local wildlife or ecological designations²⁰ and nearby factors that could have an environmental impact on site development that could need appropriate mitigation (e.g. nearby roads or railways that could impact on the site in terms of noise, vibration and/or air quality such as the West Coast Main Line and the A41);

Assessment Criterion 13- Spatial Opportunities and Constraints

- Assessing all sites across a number of quantitative and qualitative spatial factors not covered by other assessment criteria, including:

¹⁵ The potential for mix of housing types has also been considered fully in the development of the design case studies used in this study, which are set out in detail in Volume 2.

¹⁶ See NPPF paragraph 193.

¹⁷ See NPPF paragraph 170.

¹⁸ The Indices of Multiple Deprivation 2015 map is available at <http://dclgapps.communities.gov.uk/imd/idmap.html>

¹⁹ In line with NPPF paragraph 103.

²⁰ Consistent with NPPF paragraph 171, which states that plans should distinguish between the hierarchy of international, national and locally designated sites.

- ensuring that the scale and location of proposed development is sympathetic to local character and history²¹;
- establishing or maintain a strong sense of place²² through, for example, avoiding actual or perceived coalescence between settlements; and
- Taking into account the potential for existing or new defensible boundaries to act as a clear 'edge' for development²³.

2.4. Site capacity and densities

32. In site capacity assessment, residential density is measured in dwellings per hectare (dph). While in the past, central and local government policy have required minimum densities (commonly this was 30 dwellings per hectare), this is no longer a mandatory requirement for development in Dacorum. Therefore, AECOM have not assumed a specific minimum density for the purposes of this study. Instead, development capacity has been calculated for each site as part of Phase 2 assessment, estimating the total number of dwellings or, where relevant, employment space (in square metres) for each site. However, unlike the other elements of the Phase 2 assessment, capacity/density is not a criterion used as a direct measure of site suitability.
33. Residential densities can be expressed as 'net' densities and 'gross' densities. Net densities include the land-take of the dwellings themselves and the limited immediate infrastructure needed to support them (i.e. gardens, limited local play areas, and access network, including but not limited to streets).
34. By contrast, gross densities, alongside these more residential-related uses, include the much wider range of services and facilities needed to make up a sustainable place. This encompasses the land needed for supporting infrastructure such as schools, employment areas, rail infrastructure, strategic roads, open space, and health provision. As such, gross densities are significantly lower than net densities.

Sites up to 15 hectares

35. A design case study approach was applied to all residential, employment and mixed-use sites under 15 hectares to determine capacity based on net density. A design case study approach entails developing an appropriate range of high-level/concept masterplans for a selection of representative sites and then determining which of the case studies is most applicable to each of all sites being assessed. It also informs the mix of different types and sizes of housing that is achievable on each site. To ensure they are realistic and deliverable, the design case studies applied the existing infrastructure standards used by the Borough Council in adopted Local Plan policy, which are set out in Appendix C.
36. The judgement on which case study to all to each suitable site takes into account the characteristics of individual sites, including transport capacity, with locations that are well-served by public transport able to support relatively higher densities. The amount of land likely to be needed for open space (in line with relevant infrastructure standards) and the findings of local housing need assessments in terms of the type and size of housing also informed the development of all case studies and which design case study to apply in each case.
37. The design case study approach to capacity assessment is more nuanced and accurate than simply applying standard density multipliers to all sites. However, to ensure consistency with the study as a whole, the assessment has not taken into account any technical work undertaken by individual landowners, such as potential development layouts. The approach is indicative and high-level only, meaning it does

²¹ NPPF para. 127 c.

²² NPPF para 127 d.

²³ NPPF paragraph 127.

not represent a preferred design layout for any particular site and may not take into account smaller-scale individual site constraints and opportunities not visible at this scale of assessment.

38. As such, each of the capacities generated by the design case studies should be considered as a baseline figure, recognising that some sites will have the potential to be developed at a different capacity, depending on site circumstances.

Sites larger than 15 hectares

39. A slightly different approach was required for the very largest sites, reflecting the additional land-take required for non-residential development at these larger scales, i.e. moving from the net densities of the design case studies to the gross densities needed for realistic assessment at a larger scale.
40. AECOM's approach took into account sites over 15 hectares in the Dacorum Site Allocations DPD Masterplans, as well as the existing densities of Dacorum's main settlements, and finally to existing masterplans being progressed by AECOM elsewhere in the South East of England at a town-wide scale. This suggests that it would be appropriate and reasonable to assume a gross density of 17.5 dwellings per hectare for the capacity of sites over fifteen hectares within this study.
41. This figure is lower than the 18.85 dph average in the Site Allocations DPD Masterplans to reflect the significantly increased size of some of the sites being assessed in this study, the largest of which is over 400 hectares in size (whereas the largest in the Site Allocations is far smaller at 51 hectares).
42. The density figure assumed for the study sites over 15 hectares in size is comparable with those of entire settlements, albeit slightly higher to reflect the fact that the whole settlement densities include entire town centres, whereas even the very largest sites being assessed through this study comprise suburban locations which, while incorporating a wide range of non-residential land and uses in the interests of sustainable place-making, consist of residential land to a greater extent than a whole settlement does.
43. Note the limited relationship between gross and net densities. High net densities can be achieved even where gross densities are low. For example, on a recent masterplan and planning application for Homes England to deliver an urban extension to Burgess Hill in West Sussex, AECOM achieved a net density of 45 dwellings per hectare for residential areas despite an overall site gross density of 17.5 dwellings per hectare.

3. Policy and Evidence Base Review

3.1. Introduction

44. As part of the study, AECOM reviewed relevant provisions of national and local policy and evidence base documents that together form the context for planning at Dacorum at the time of writing. Unless otherwise stated, the baseline for all information, data, evidence and policy reviewed and/or referenced in this report comprised the evidence available on the Dacorum borough website at October 2018, and other relevant sources (for example, Google Maps and Google Earth), with some limited additional material and updates added at the time of finalising the report during 2019.
45. In this sense, it is important to remember that this study, just like all other assessments of its type, can only ever be a snapshot in time. After completion it can and will gradually be superseded by changes on the ground and the on-going development of the planning evidence base.
46. A number of site submissions considered in this assessment were supported by their own developer-commissioned technical evidence. While this evidence can help inform the understanding of the constraints and opportunities affecting sites, DBC and AECOM agreed that it was better that the study come to its own conclusions on technical suitability and achievability in order to ensure all sites were appraised in an independent and consistent manner.
47. The policy review was conducted by topic area. Within each topic, documents are presented in the following order: national policy first, then adopted local policy, followed by emerging local policy and finally evidence documents. Given the extent and scale of the Dacorum Borough Local Plan evidence base, the review sets out only those elements of policy documents considered directly relevant to the site assessment. Those documents with less direct relevance and/or those published longer ago are not listed.

3.2. Coverage

48. The policy and evidence base review covered the following twelve topic areas:
 - Housing and distribution of development;
 - Economics and employment;
 - Transport;
 - Heritage;
 - Landscape, agricultural land and geotechnical considerations;
 - Greenbelt;
 - Environmental designations;
 - Green infrastructure;
 - Flood risk;
 - Retail;
 - Community infrastructure; and
 - Sustainability appraisal.

49. For each topic area, the review examined policy and evidence documents for relevant information either outlining constraints to growth, identifying projects or conditions required to facilitate growth, or setting requirements of future growth in Dacorum. All of this information was taken into account to help identify suitable strategic locations for growth.

3.3. Outcomes

50. The detailed findings of this review were extensive and have therefore been set out in Appendix A and listed in order of topic area, for ease of reference. The key findings are summarised below.
51. Growth should be sited to ensure the following outcomes:
- Development that is environmentally, socially and economically sustainable;
 - A mixture of differently sized sites to meet a range of development needs;
 - Prioritisation of development on brownfield rather than greenfield land, and avoidance of isolated greenfield development in the countryside except in exceptional circumstances;
 - Prioritisation of growth according to the defined settlement hierarchy;
 - Avoidance of key constraints identified in the evidence base including but not limited to Green Belt land, heritage and environmental designations, areas of high landscape sensitivity, areas of high agricultural quality and areas of high flood risk; where this is not possible, or where other criteria combine to indicate development is more suitable, mitigation of negative effects.
 - Ensuring areas of growth are sufficiently supported by appropriate services and infrastructure including transport, utilities, community and green infrastructure, a sufficient retail offer and jobs.
 - Reduction of the need to travel and maximise use of sustainable modes of transport.
52. Note also that a separate policy and evidence review for viability and deliverability is set out in the viability report (Volume 4). To avoid duplication, the policy review does not refer to policies covering that topic.

4. Identified Sites for Assessment

4.1. Introduction

53. In total, DBC provided 144 sites from a range of sources for AECOM to assess for this study. The sites had not previously been subjected to any filtering or sorting, though there was a broad assumption that, in the absence of evidence to the contrary²⁴, they remained available for development despite the time that had elapsed since their original submission to the Council.
54. Because the sites came from a range of sources, the numbering/identifier for each was not consistent with the pool of sites as a whole. As such, all sites were renumbered for the purposes of this study, and no further reference was made to any previous site number. The numbering is in broad (though not exact)²⁵ geographical order by study area settlement.
55. The 144 sites provided to AECOM for assessment ranged in size from less than 1 hectare to 407 hectares. The largest sites were adjacent to Berkhamsted, Hemel Hempstead and Tring. Where a site included a significant area unsuitable for housing, such as in one case a large lake, this area was excluded from the total site area.
56. Each site was linked to its nearest and/or adjacent settlement:
 - The greatest number of sites were located near Hemel Hempstead (25 sites) and Berkhamsted (24 sites);
 - 16 sites were located near Kings Langley and 14 near Tring;
 - 13 near Markyate and 12 sites nearest Bovingdon;
 - 8 sites nearest Bourne End, seven sites near Flamstead and six near Chipperfield;
 - 4 sites each were near Potten End, Wigginton and Wilstone;
 - 2 sites near Little Gaddesden, and;
 - One site only was located each near Bridens Camp, Cow Roast, Flaunden, Great Gaddesden, and Long Marston.
57. The first and most obvious filtering exercise that needed to be applied was to eliminate sites outside the scope of the study. This comprised the following:
 - all sites smaller than 0.3 hectares, agreed to be too small to consider for allocation;
 - all sites currently forming part of the existing urban area (a small number of such sites were included in error but will be covered within the scope of the separate urban SHLAA);
 - all sites that overlap 100% with other sites; and
 - all sites that, subsequent to being submitted to Dacorum and/or subsequent to the start of this study, had already been allocated or granted planning permission for development.

²⁴ Evidence to the contrary included any or all of the following: where sites had been explicitly withdrawn for consideration by the landowner; where repeated attempts to contact the landowner to determine continued availability had been made without success; where planning permission had been granted; where development had been implemented; where land had already been allocated.

²⁵ This is because sites 142, 143 and 144, at Kings Langley and Hemel Hempstead were only confirmed as being within the scope of the assessment after the previous 141 sites had been numbered.

58. This filtering has no relationship to the suitability or otherwise of these sites for residential or employment development. As such, landowners promoting sites smaller than 0.3 hectares are encouraged, if they wish to apply for planning permission, to do so in the normal way, seeking where appropriate pre-application advice from the Council having appropriate regard to the constrained nature of the study area (Green Belt, AONB etc.) rather than to seek allocation through the Local Plan.
59. Table 1 overleaf sets out those sites filtered out of the study at this stage for the three reasons stated above. In total, 26 sites were filtered out in this way.

Table 1: Sites filtered out of the Dacorum Site Assessment Study due to size, overlap or existing planning permission

Site number for study purposes	Site name	Nearest settlement	Site area (hectares)	Reason site was filtered out	
5	Darrs Lane and St Mary's Avenue, Northchurch	Berkhamsted	0.05	All smaller than 0.3 ha	
8	Land at Castle Gateway, Castle Hill	Berkhamsted	0.28		
24	The Lodge, Woodcock Hill	Berkhamsted	0.16		
70	Land at Ridgeway Close	Hemel Hempstead	0.24		
76	Woodhall, Woodhall Lane	Hemel Hempstead	0.09		
79	Pouchen End Hall, Pouchen End Lane	Hemel Hempstead	0.01		
85	127 Hempstead Road	King Langley	0.24		
96	Love Lane	Kings Langley	0.28		
109	Land north of Pickford Road and Friendless Lane	Markyate	0.22		
116	Iona, Vicarage Road	Potten End	0.08		
123	Ivy Cottage Station Road	Tring	0.01		
137	Woodside, Chesham Road	Wigginton	0.06		
11	Ivy House Lane	Berkhamsted	5.24		100% overlap with site 15
21	London Road	Berkhamsted	3.9		100% overlap with site 12
50	Land to south of Chapel Croft	Chipperfield	1.28	100% overlap with site 49	
77	126 Oatfield, Dodds Lane, Piccotts End	Hemel Hempstead	3.23	100% overlap with site 74	
95	Land south of Trout Lake Bungalow/Gaywood Land	Kings Langley	1.88	100% overlap with site 92	
105	Land South of Markyate	Markyate	32.19	100% overlap with site 110	
108	Land east of Pickford Road	Markyate	2.43	100% overlap with site 112	
143	Camelot Rugby Club, Chaulden Lane	Hemel Hempstead	0.42	100% overlap with site 83	
7	Durrants Lane and Shootersway	Berkhamsted	3.24	Existing planning permission, within urban area or site allocation	
75	Grovehill Local Centre (Henry Wells Square)	Hemel Hempstead	1.44		
90	West Meon, 46 Langley Hill	Kings Langley	0.39		
91	Land adjacent to Coniston Road	Kings Langley	0.38		
127	Land South of Aylesbury Road	Tring	18.75		
144	Land south of Laidon Square, Hemel Hempstead	Hemel Hempstead	0.68		

Source: Dacorum Borough Council

60. As well as the sites set out in Table 1 above, site 130 (land south of Park Road/west of East Lodge, Tring) overlaps entirely with site 133. However, as both sites lie entirely within the AONB, an exception applies due to filtering associated with the AONB policy, explained in more detail below. For this reason, site 130 should not be deleted as an overlap at this initial stage.

61. Additionally, sites 41 and 42 both overlap entirely with site 40. However, again, an exception has been made in this case based on the Green Belt Review, because of the potential for 41 and 42, being much smaller and closer to the settlement edge of Bovington, to perform significantly differently from site 40 on this assessment criterion. This is also consistent with the fact that the sites in this particular location were specifically promoted to the Council as a range of different options.
62. Finally, in consultation with DBC, two sites were merged with others due to their proximity, landownership and/or similarities with larger neighbouring sites (See Table 2 below). Following this merging exercise, the remaining 117 sites were taken forward to Phases 1 and 2 assessment.

Table 2: Sites filtered out of the Dacorum Site Assessment Study due to merging with another site

Site number for study purposes	Site name	Nearest settlement	Site area (hectares)	Number of site merged into
9	Land adj. Chesham Road, south of Ashlyns School	Berkhamsted	2.59	2
36	Grange Farm Extension	Bovington	1.25	35

Source: *Dacorum Borough Council*

5. Phase 1 Assessment

5.1. Introduction

63. This chapter sets out the process and the outcomes of the Phase 1 assessment. The objective of Phase 1 assessment is to sift out those sites among those remaining in the assessment pool that are most obviously not suitable for allocation. This relates mainly to immovable physical features and protective designations. It is important that sifting is done on the basis of truly insurmountable constraints so that the assessment is fully defensible. Where a site is assessed as unsuitable for allocation at this point, the reasons for the decision are set out in full.
64. The key benefit of this early sifting process is that of a more efficient, focussed study. There is no point assessing all remaining sites in full detail across all relevant criteria if some of those sites have a fundamental constraint to their developability in any case.
65. A pragmatic approach was taken in order to maximise the amount of land that could progress to the detailed Phase 2 assessment. This meant that if any of the sites that would otherwise be considered unsuitable for allocation could be made more suitable through boundary reductions in order to remove or minimise immovable and/or significant constraints to development, the assessment recommended the boundaries to which the site could be reduced, and as such the site with its new reduced boundaries was progressed to the Phase 2 assessment.
66. However, it is important to note at this point that, in line with the approach of progressing the study independent of site promoters, the recommendations for boundary reductions do remain only recommendations at this stage.

5.2. Assessment

67. Those sites that were considered unsuitable for allocation as a result of the Phase 1 Assessment process described above are set out in Table 3 below, with the reasons for removal set out in each case.

Table 3: Sites considered wholly or partially unsuitable for allocation through Phase 1 Assessment

Site number for study purposes	Site name	Nearest settlement	Site area (hectares)	Reason considered unsuitable for allocation
6	Demeath, Shootersway	Berkhamsted	0.99	Site situated in the open countryside for planning purposes
14	Land at Darfields, Shootersway/Darrs Lane	Berkhamsted	1.12	1.12 ha of the site (100%) falls in an AONB
19	Land off Pea Lane	Berkhamsted	7.29	7.29 ha of the site (100%) falls in an AONB
22	New Road	Berkhamsted	14.42	12.9 ha (89%) of the site falls in an AONB. 11% of site not in AONB is in two separate parcels, one with no access and the other with capacity smaller than 10 dwellings
25	Land adj. A41, Bourne End (Amen Corner)	Bourne End	0.47	Site situated in the open countryside for planning purposes
26	Land south of Bourne End/adj. A41 (Bourne End Field)	Bourne End	1.96	Site situated in the open countryside for planning purposes
27	Kingsway, London Road	Bourne End	0.71	Site situated in the open countryside for planning purposes
29	Land East of Sugar Lane	Bourne End	3.63	Site situated in the open countryside for planning purposes
30	Land north of Stoney Lane	Bourne End	6.70	Site situated in the open countryside for planning purposes
31	Land off Upper Bourne End Lane	Bourne End	15.85	Site situated in the open countryside for planning purposes
32	Stoney Lane	Bourne End	10.33	Site situated in the open countryside for planning purposes
37	Hempstead Road and Stoney Lane	Bovingdon	6.93	Site situated in the open countryside for planning purposes
38	Highcroft Paddocks	Bovingdon	0.38	Site situated in the open countryside for planning purposes
43	Maple Farm, Shantock Lane	Bovingdon	3.40	Site situated in the open countryside for planning purposes
44	The Yard, Middle Lane	Bovingdon	1.67	Site situated in the open countryside for planning purposes
45	Land adj. Crown and Sceptre	Bridens Camp	0.41	Site situated in the open countryside for planning purposes
52	Land SE of Mini dealership	Cow Roast	0.94	Site situated in the open countryside for planning purposes
56	Land SE of Rose and Crown, Trowley Bottom	Flamstead	0.91	0.91 ha (100%) of the site falls in an AONB
60	Land south of Flaunden Hill	Flaunden	1.61	Site situated in the open countryside for planning purposes
65	Holtsmere End Farm	Hemel Hempstead	33.51	Site situated in the open countryside for planning purposes
68	Land adjacent to Hay Lodge, London Road	Hemel Hempstead	0.94	Site situated in the open countryside for planning purposes

Site number for study purposes	Site name	Nearest settlement	Site area (hectares)	Reason considered unsuitable for allocation
100	Land to west of Hoo House	Little Gaddesden	0.90	0.9 ha (100%) of the site falls in an AONB
102	Land North of Buckwood Road	Markyate	3.73	3.73 ha (100%) of the site falls in an AONB
103	Land South of Buckwood Road	Markyate	6.80	6.8 ha (100%) of the site falls in an AONB
104	Cell Park Farm	Markyate	14.59	13.7 ha (94%) of the site falls in an AONB, and also site situated in the open countryside for planning purposes
110	Cotton Spring Farm	Markyate	32.19	20.8 ha (65%) of the site falls in an AONB. 11.39 ha (35%) of site outside AONB progresses to Phase 2 assessment (but with 1.88 hectares discounted due to overlapping with site 114, so 9.51 hectares in total progresses to Phase 2.
111	Land south of Junction 10A M1	Markyate	15.70	Site situated in the open countryside for planning purposes
112	Land south-east of Markyate	Markyate	32.63	22.9 ha (70%) of the site falls in an AONB. 9.73 ha (30%) of site that does not fall in AONB has 100% overlap with site 110 and thus can be discounted from further assessment.
119	Land East of Nettleden Road	Little Gaddesden	1.84	1.84 ha (100%) of the site falls within the AONB
120	Land adj. Myrtle Cottages north of Bulbourne Road	Tring	0.39	Site situated in the open countryside for planning purposes. Has potential to be suitable if Site 124 were to be allocated- but filtered out in Phase 1 based on current situation/information
121	Cow Lane-Station Road	Tring	2.65	2.65 ha (100%) of the site falls in an AONB
125	Land north of Bulbourne Road	Tring	31.28	31.28 ha (100%) of the site falls in an AONB
129	Land south of Park Road	Tring	3.60	3.6 ha (100%) of the site falls in an AONB
131	Land south of Park Road / Hastoe Lane / Adj. A41	Tring	0.62	0.62 ha (100%) of the site falls in an AONB
133	Land east of Woodland Close	Tring	1.34	1.34 ha (100%) of the site falls in an AONB ²⁶
134	Chesham Road, Site A	Wigginton	0.80	0.8 ha (100%) of the site fall in an AONB
135	Chesham Road, Site B	Wigginton	1.79	1.79 ha (100%) of the site falls in an AONB

²⁶ Though site 130 overlaps entirely with site 133, as noted previously in the text on overlapping sites, it is 0.38 hectares in size. This means that rather than being deleted as an overlap, an exception applies whereby site 133 can progress to Phase 2 assessment because it is smaller than 0.5 hectares within an AONB. However, the wider site 133 cannot as it is 1.34 hectares within an AONB (or 0.96 hectares within an AONB if the overlap with 130 is discounted); in both cases, it is over 0.5 hectares within an AONB.

Site number for study purposes	Site name	Nearest settlement	Site area (hectares)	Reason considered unsuitable for allocation
136	Chesham Road, Site C	Wigginton	3.31	3.31 ha (100%) of the site falls in an AONB
138	Dixons Gap	Wilstone	1.82	Site situated in the open countryside for planning purposes

68. It is also worth noting that, as illustrated in Table 3, of the eight criteria listed in Chapter 2 having potential to render sites unsuitable for allocation at this point, in practice, only two (location within open countryside for planning purposes and constituting major development in an AONB) resulted in sites being filtered out at this stage.

5.3. Results of Phase 1 Assessment

69. In total, out of the remaining pool of 117 sites, the Phase 1 Assessment indicates that thirty-eight are wholly unsuitable for allocation and one site is partially unsuitable for allocation. The remaining 79 sites (including the potentially suitable portion of the one deemed partially unsuitable) are listed in Appendix A and were carried forward for Phase 2 assessment.

6. Phase 2 Assessment

6.1. Introduction

70. As explained in Chapter 2 above, compared with the Phase 1 assessment, Phase 2 comprises a wider, more detailed exercise across the full range of technical specialisms, with each site being assessed across a range of criteria on the basis of national and local policy and evidence, alongside professional judgement, knowledge and experience.

6.2. Phase 2 approach

71. The purpose of the Phase 2 assessment is to further investigate and categorise the sites that have been considered 'potentially suitable' for development on the basis of the Phase 1 assessment and the other filters that preceded it (i.e. those sifting out the smallest, merged and overlapping, and already developed or consented sites).
72. As such, the 79 sites that remain will be investigated and categorised further, on the basis of their performance across thirteen assessment criteria. All sites were sorted into one of two categories as follows:
 - sites that are potentially suitable for allocation, subject to mitigation of minor or major constraints (noting that these constraints have some potential to be mitigated); and
 - sites that are considered not suitable for allocation.

6.3. Phase 2 assessment criteria

73. The full list of the thirteen Phase 2 assessment criteria, and how each criterion was applied to each site, in general terms, is set out in Chapter 2 on AECOM's approach, above. As a brief recap for the purposes of this chapter, these criteria are:
 - Transport and accessibility;
 - Green Belt;
 - Flood risk;
 - Geo-environmental;
 - Agricultural land quality;
 - Land uses- both existing and neighbouring;
 - Potential for mix of housing types;
 - Heritage;
 - Local landscape and visual impact;
 - Regeneration potential;
 - Economic potential;
 - Environmental impact; and
 - Spatial opportunities and constraints.

6.4. Phase 2 assessment results

74. The detailed results of the Phase 2 assessment are extensive, covering thirteen criteria for each of seventy-nine sites, with a total of over a thousand individual assessments. As such, full assessment results are set out in Volume 3 of this study and summarised in Chapter 8 below.
75. As a result of the Phase 2 assessment, 33 sites were considered not suitable for allocation, and 46 sites were considered potentially suitable, of which 34 had major constraints and 12 minor constraints.

6.5. Potential for boundary amendment

76. Recognising the importance of providing DBC with as wide as possible a range of potentially suitable locations for growth, an inclusive approach was taken. This means that where boundary amendments have the potential to improve a site's performance against the assessment criteria, these have been recommended.
77. In other words, in some cases, a larger site will have been assessed either as not suitable for allocation or suitable but with major constraints. However, a smaller part of the site has the potential to be suitable for allocation.
78. Where this is the case, it has been set out in Table 4. Table 4 sets out in hectares both the site's original area and its recommended new area. The new boundaries have been developed by AECOM on the basis of site performance against the assessment criteria and are recommendations only. They are in no way binding either on DBC or the site promoter/developer/landowner.
79. In two cases, sites were considered more suitable with boundary extensions rather than reductions, recognising the fact that in this particular location, the land within the boundary extensions is also available for development because it falls within an overlapping site.
80. For clarity, sites where boundary amendments are recommended have had a letter added to their site number to distinguish them from the site as originally submitted. So, for example, Site 12 becomes Site 12a with its boundaries reduced.
81. Where sites with potential for boundary reduction are located in the Green Belt, this provides an opportunity for Green Belt release to be offset through compensatory improvements to the environmental quality and accessibility of remaining Green Belt land, in line with NPPF paragraph 138.
82. This should in theory be easy to achieve, in the sense that the land remaining in the Green Belt would be in the same ownership as that portion of the site identified as potentially suitable for allocation. Where there is potential for these types of compensatory improvements to take place, it has been stated.
83. In total, of the 46 sites considered potentially suitable for allocation at this stage, fifteen of them have been recommended for boundary amendments.

Table 4: Sites with recommended boundary amendments at Phase 2 to increase suitability for allocation

Site number for study purposes	Site name	Result of change	Nearest settlement	Original site area (hectares)	New site area (hectares)	Change (hectares)	Rationale for boundary amendment	Final site gross capacity (dwellings)	Is the land not suitable for allocation within the Green Belt?
12a	Land at Bank Mill	Site area reduces	Berkhamsted	3.9	2.67	-1.23	To remove areas of Flood Zones 2 and 3 from the site boundary.	56	Yes-landowner should improve environmental quality and accessibility of land excluded from reduced boundary
13a	Land at Bank Mill Lane (adj. Heron Place)	Site area reduces	Berkhamsted	0.8	0.38	-0.42	To exclude that part of the site that is already developed	8	No
17a	Land east of Berkhamsted	Site area reduces	Berkhamsted	92.82	70.87	-21.95	To significantly minimise risk of coalescence between Berkhamsted and Bourne End/Hemel Hempstead; to remove areas of Flood Zones 2 and 3 from the site boundary; to remove small area of overlap with neighbouring site 2.	1,240	Yes-landowner should improve environmental quality and accessibility of land excluded from reduced boundary
34a	Fox Meadow	Site area reduces	Bovingdon	2.21	1.11	-1.1	To enable site to perform better on transport/access and spatial opportunities and constraints criteria.	24	Yes-landowner should improve environmental quality and accessibility of land excluded from reduced boundary

Site number for study purposes	Site name	Result of change	Nearest settlement	Original site area (hectares)	New site area (hectares)	Change (hectares)	Rationale for boundary amendment	Final site gross capacity (dwellings)	Is the land not suitable for allocation within the Green Belt?
41a	Land north of Vicarage Lane	Site area increases	Bovingdon	0.62	1.15	0.53	To extend boundary onto available land that would improve site performance on transport and access, Green Belt, and spatial opportunities and constraints criteria.	25	n/a
42a	Land south of Hempstead Road	Site area increases	Bovingdon	0.9	1.13	0.23	To extend boundary onto available land that would improve site performance on spatial opportunities and constraints and Green Belt criteria.	25	n/a
61a	Wyevale Garden Centre	Site area reduces	Great Gaddesden	2.44	0.98	-1.46	To ensure development of site does not constitute major development in an AONB and to maintain existing landscape and visual screening	21	No
72a	Land south of Link Road / west of Fletcher Way	Site area reduces	Hemel Hempstead	9.61	5.75	-3.86	To minimise risk of coalescence and impact on mature woodland.	133	Yes-landowner should improve environmental quality and accessibility of land excluded from reduced boundary
74a	North and North-East of Hemel	Site area reduces	Hemel Hempstead	406.69	291.14	-115.55	To significantly reduce coalescence risk, landscape and visual impact, and impact on heritage assets; to remove areas of site that overlap with the AONB	5,095	Yes-landowner should improve environmental quality and accessibility of land excluded from reduced boundary

Site number for study purposes	Site name	Result of change	Nearest settlement	Original site area (hectares)	New site area (hectares)	Change (hectares)	Rationale for boundary amendment	Final site gross capacity (dwellings)	Is the land not suitable for allocation within the Green Belt?
78a	Polehanger Lane	Site area reduces	Hemel Hempstead	55.21	47.1	-8.11	To remove area of ancient woodland from the site, meaning that some land beyond also must be removed as it would be inaccessible	824	Yes-landowner should improve environmental quality and accessibility of land excluded from reduced boundary
80a	Pouchen End Lane	Site area reduces	Hemel Hempstead	102.81	14.4	-88.41	To improve site performance on the following criteria: Green Belt, landscape, AONB setting, ancient woodland, SSSI, local wildlife site, flood risk and coalescence.	360	Yes-landowner should improve environmental quality and accessibility of land excluded from reduced boundary
99a	Wayside Farm, Middle Farm and A4251	Site area reduces	Kings Langley	69.9	39.10	-30.8	To improve site performance on Green Belt, coalescence risk and flood risk.	684	Yes-landowner should improve environmental quality and accessibility of land excluded from reduced boundary

Site number for study purposes	Site name	Result of change	Nearest settlement	Original site area (hectares)	New site area (hectares)	Change (hectares)	Rationale for boundary amendment	Final site gross capacity (dwellings)	Is the land not suitable for allocation within the Green Belt?
110a	Cotton Spring Farm	Site area reduces	Markyate	9.51 ²⁷	1.76	-7.75	To remove village green from site and to mitigate transport and access constraints	39	Yes-landowner should improve environmental quality and accessibility of land excluded from reduced boundary
114a	London Road	Site area reduces	Markyate	6.25	5.03	-1.22	To remove areas of Flood Zones 2 and 3 from the site boundary. However, reduced site would still require main access through flood zone, with design mitigation needed.	131	Yes-landowner should improve environmental quality and accessibility of land excluded from reduced boundary
122a	Dunsley Farm	Site area reduces	Tring	37.25	16.4	-20.85	To remove land within Local Wildlife Site designation, and land to the east, which becomes unsuitable in planning terms once the Local Wildlife Site is removed	287	Yes-landowner should improve environmental quality and accessibility of land excluded from reduced boundary

Source: Dacorum Borough Council, AECOM

²⁷ Having already been reduced from an original 32.19 hectares through Phase 1 assessment.

7. Viability and Deliverability

7.1. Introduction

84. This chapter provides a non-technical summary of the viability and deliverability assessment that forms Volume 4 of this study. This chapter can be read on a standalone basis and is based on Chapter 12 of Volume 4. It can only be a summary as a viability assessment of this type is, by its very nature, a technical document that is prepared to address the very specific requirements of national planning policy.

7.2. Context and scope

Viability Testing under the 2019 NPPF and Updated PPG

85. The effectiveness of plans was stated to be important under the 2012 NPPF, but a greater emphasis is put on deliverability in the 2019 NPPF. The overall requirement (as set out in the PPG²⁸) is that *'...policy requirements should be informed by evidence of infrastructure and affordable housing need, and a proportionate assessment of viability that takes into account all relevant policies, and local and national standards, including the cost implications of the Community Infrastructure Levy (CIL) and section 106 ...'*.
86. The Site Assessment Study Viability Assessment takes a proportionate approach, building on the Council's existing available evidence, and considers also the effect of the local and national policies that will apply to new development.
87. The PPG requires that *'drafting of plan policies should be iterative and informed by engagement with developers, landowners, and infrastructure and affordable housing providers'*. This report informs that process. It has included a consultation with the development industry, as well as refinement of policy with the Council.
88. This study is based on typologies representative of the sites with potential to be allocated in the new Local Plan. In addition, the potential Strategic Sites have been modelled separately as they are most important to the delivery of the Plan.
89. The updated PPG requires viability to be tested using the Existing Use Value Plus (EUV+) approach: *To define land value for any viability assessment, a benchmark land value should be established on the basis of the existing use value (EUV) of the land, plus a premium for the landowner. The premium for the landowner should reflect the minimum return at which it is considered a reasonable landowner would be willing to sell their land. The premium should provide a reasonable incentive, in comparison with other options available, for the landowner to sell land for development while allowing a sufficient contribution to comply with policy requirements. Landowners and site purchasers should consider policy requirements when agreeing land transactions. This approach is often called 'existing use value plus' (EUV+).*
90. Research has been undertaken into the price paid for land with a recent, policy compliant planning consent. Overall the average price is £4,300,000/ha with a median of £5,900,000/ha; however these mainly relate to smaller sites. We have used a Benchmark Land Value (BLV), of EUV plus 20% on brownfield sites. On greenfield sites, a BLV based on an EUV plus £1,400,000/ha is used on sites over 3ha in size, and EUV plus £2,000,000/ha is used on sites less than 3ha. The BLV is the amount the Residual Value must exceed for the development to be considered viable.

²⁸ Ibid.

Viability Guidance

91. There is no specific technical guidance on how to test the viability in the 2019 NPPF or the updated PPG, although the updated PPG includes guidance in a number of specific areas. There are several sources of guidance and appeal decisions that support the methodology HDH has developed. This study follows the Viability Testing in Local Plans – Advice for Planning Practitioners²⁹ document published in June 2012 (known as the Harman Guidance after its main author).
92. In line with the updated PPG, this study follows the EUV Plus (EUV+) methodology of comparing the Residual Value generated by the viability appraisals with the EUV plus an appropriate uplift to incentivise a landowner to sell. The amount of the uplift over and above the EUV is central to the assessment of viability. It must be set at a level to provide a competitive return to the landowner. To inform the judgement as to whether the uplift is set at the appropriate level, reference is made to the market value of the land both with and without the benefit of planning permission.
93. The availability and cost of land are matters at the core of viability for any property development. The format of the typical valuation is:

Gross Development Value

(The combined value of the complete development)

LESS

Cost of creating the asset, including a profit margin

(Construction + fees + finance charges)

=

RESIDUAL VALUE

94. The result of the calculation indicates a land value, the Residual Value. The Residual Value is the top limit of the price a developer could offer for a site and still make a satisfactory return.
95. The PPG and the CIL Guidance requires stakeholder engagement in viability assessment. As such, a consultation event was held during February 2019 with relevant local property market stakeholders. The comments of the consultees are reflected through this report and the assumptions have been adjusted where appropriate. While agreement on all points was not reached, there was broad consensus on most matters.

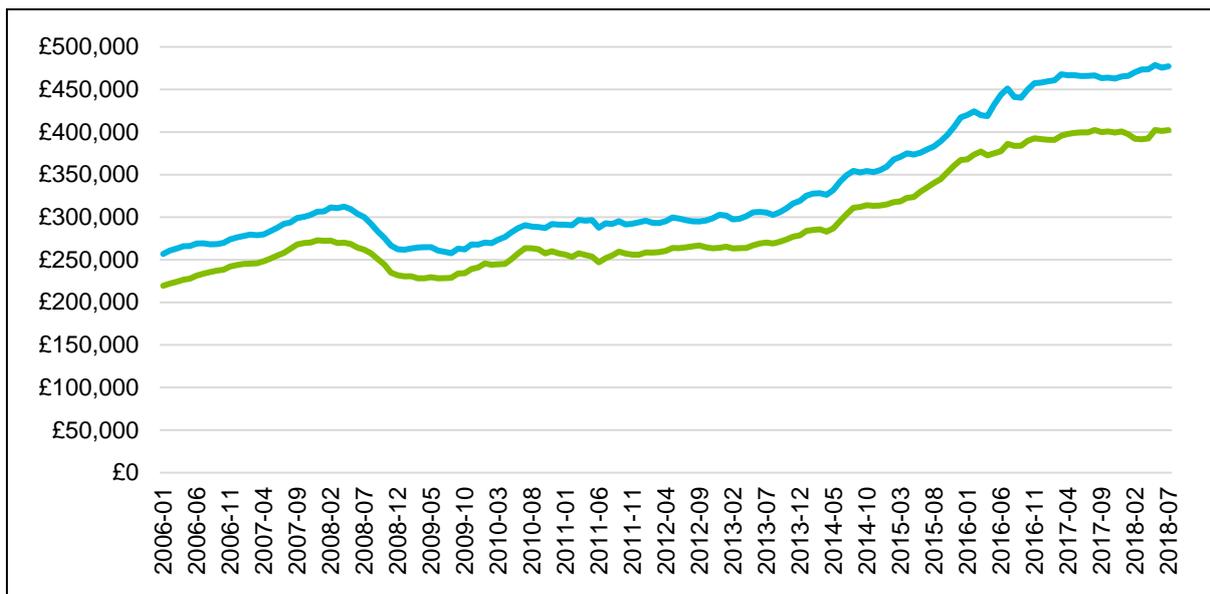
7.3. Methodology and assumptions

96. The assessment of viability as required under the 2019 NPPF and the CIL Regulations is a quantitative and qualitative process. The basic methodology involves preparing financial development appraisals for a representative range of typologies, and using these to assess whether development, in general, is viable. The sites were modelled based on discussions with Council officers, the site information provided by AECOM following suitability assessment, and on HDH's own experience of development. This process ensures that the appraisals are representative of typical development under consideration.
97. In addition to modelling a range of representative sites as viability case studies (not to be confused with the design case studies set out in Volume 2), ten larger Strategic Sites were modelled.

²⁹ Available at <https://www.local.gov.uk/sites/default/files/documents/viability-testing-local-p-42b.pdf>

98. An assessment of the housing market was undertaken. The study is concerned not just with the prices but the differences across different areas.
99. Average house prices across England and Wales have recovered to their pre-recession peak; however, this is strongly influenced by London. Prices in London are now well in excess (about 60%) of the 2007/2008 peak and, as can be seen in Figure 1 below, prices in Dacorum are about 47% above the previous peak. This is somewhat more than across England and Wales (27%).
100. A notable characteristic of the data is that the values of newbuild homes are about 20% higher than existing homes.

Figure 1: Change in Dacorum house prices- existing (green) versus newbuild (blue)



Source: Land Registry (December 2018)

101. This report was drafted and completed after the United Kingdom voted to leave the European Union but before Brexit actually occurred. As such, at the time of writing, it is not yet possible to predict the impact of leaving the EU, beyond the fact that the UK and the UK economy is in a period of uncertainty.
102. A range of views as to the impact of Brexit on house prices have been expressed that cover nearly the whole spectrum of possibilities. There is clearly uncertainty in the market, and it is not for this study to try to predict how the market may change in the coming years, and whether or not there will be a further increase in house prices.
103. A survey of asking prices across the Council area was carried out in December 2018. In addition, recent newbuild sales prices from the Land Registry have been reviewed and a survey of new homes for sale during July 2018 carried out. The Land Registry publishes data of all homes sold. Across the DBC area 353 newbuild home sales were recorded since the start of 2017. Each house sold requires an Energy Performance Certificate (EPC). This is a public document that can be viewed on the EPC Register. The EPC states the floor area (the Gross Internal Area – GIA) as well as a wide range of other information about the construction and energy performance of the building. The price paid data from the Land Registry has been cross-referenced to dwelling floor areas from the EPC Register.

Table 5: Land Registry Price Paid Data with EPC Data

	Detached	Flats	Semi-detached	Terraced	All
Berkhamsted					
Count	45	20	2	0	67
Average £	£724,632	£515,063	£672,500	£0	£660,518
Average £/m2	£5,652	£6,873	£6,011	£0	£6,027
Hemel Hempstead					
Count	49	103	58	46	256
Average £	£508,677	£293,254	£388,377	£404,302	£375,993
Average £/m2	£4,169	£5,345	£4,122	£4,146	£4,631
Tring					
Count	2	16	2	10	30
Average £	£1,100,000	£280,406	£917,359	£534,450	£462,191
Average £/m2	£4,247	£4,404	£3,597	£5,400	£4,672
Dacorum					
Count	96	139	62	56	353
Average £	£622,225	£323,690	£414,606	£427,543	£437,322
Average £/m2	£4,873	£5,457	£4,167	£4,370	£4,901

Source: Land Registry and EPC Register (December 2018)

104. The average price paid for residential property is about £4,900/m². The average prices vary by geography, with Berkhamsted being the most expensive area based on this data. Having said this, the principal driver of the differences is the situation rather than the location of a site. That is to say, the value will be more strongly influenced by specific site characteristics, the immediate neighbours and environment, rather than in which particular ward or postcode the scheme is located.

Price Assumptions for Financial Appraisals

105. Bringing together the evidence above (which it is acknowledged is varied), the price assumptions set out in Table 6 have been used.

Table 6: Price Assumptions – March 2019 (£/m²)

Description	CIL ZONE 1	CIL ZONE 2	CIL ZONE 3
	Berkhamsted and surrounding area	Elsewhere	Hemel Hempstead and Markyate
Larger Brownfield	£5,700	£4,400	£4,600
Smaller Brownfield Sites	£5,700	£4,400	£4,600
Large Greenfield	£5,700	£4,450	£4,600
Medium Greenfield	£5,700	£4,450	£4,600

Source: HDH (March 2019)

Affordable Housing

106. In this study, it is assumed that affordable housing is constructed by the site developer and then sold to a Registered Provider (RP). The following values are used across the Borough:

- a) Affordable Rent – a value of £2,700/m².
- b) Intermediate Products for Sale – 70% of Open Market Value.

Non-Residential Values

107. In the DBC area, market conditions will broadly reflect a combination of national economic circumstances and local supply and demand factors. The following assumptions have been used based on up-to-date evidence:

- a) Office development is assumed to have a value of £3,000/m².
- b) Industrial development is assumed to have a value of £1,450/m².

Land Prices

108. An important element of the assessment is the value of the land. Under the method set out in the updated PPG and recommended in the Harman Guidance, it is the worth of the land before consideration of any increase in value from any planning consent that is defined as the Existing Use Value (EUV). This is therefore used as the starting point for the assessment.

109. In this assessment the following Existing Use Value (EUV) assumptions are used.

Table 7: EUV Assumptions £/ha (September 2018)

Site type	EUV, £/ha
Residential Large Sites	£650,000
Industrial	£1,800,000
Agricultural	£25,000
Paddock	£75,000

Source: HDH 2018

110. The updated PPG makes specific reference to benchmark land value so it is necessary to address this. In this iteration of this Assessment the following BLV assumptions are made:

- a. Based on EUV + where the EUV is:
 - i. Industrial: £1,800,000/ha
 - ii. Agricultural: £25,000/ha
 - iii. Paddock: £75,000/ha
- b. On brownfield sites an uplift of 20% is used to give a Benchmark Land Value close to the median price paid for recently consented, policy compliant land – most of which is brownfield land.
- c. On greenfield sites an uplift of £600,000 is used to give a Benchmark Land Value that is a little less than £650,000/ha.

Development Costs

111. These comprise the costs and other assumptions required to produce the financial appraisals.

Construction costs: baseline costs

112. The cost assumptions are derived from the Building Cost Information Service (BCIS) data, rebased for Hertfordshire (1st September 2018). At this time the costs for what is defined as 'estate housing'³⁰ generally is £1,323/m².

Other normal development costs

113. In addition to the BCIS £/m² build cost figures described above, allowance needs to be made for a range of site costs (roads, drainage and services within the site, parking, footpaths, landscaping and other external costs). A scale of allowances has been developed for the residential sites, ranging from 10% of build costs for the smaller sites and flatted schemes to 20% for the larger greenfield multi-outlet/multi-phase schemes.

Abnormal development costs

114. An additional allowance of 5% of the BCIS costs is made for abnormal costs associated with brownfield sites. Abnormal costs will be reflected in land value (and in due course at the development management stage, in the BLV). Those sites that are less expensive to develop will command a premium price over and above those that have exceptional or abnormal costs. A study of this type is not able to standardise land prices across an area.

Fees

115. Professional fees are assumed to amount to 8% of build costs. Additional allowance is made for the planning application fee, acquisition costs, sales (disposal) fees and fees in relation to finance.

Contingencies

116. For previously undeveloped and otherwise straightforward to develop sites we have allowed a contingency of 2.5%, with a higher figure of 5% on more risky types of development, previously developed land and land in central locations. This is applied to the construction costs.

CIL and s106 Contributions

117. DBC has adopted CIL. The current rates are used in this assessment. It is assumed that each residential site will also contribute £1,500/unit towards infrastructure.

Financial and Other Appraisal Assumptions

118. It has been assumed throughout either that VAT does not arise, or that it can be recovered in full.
119. The appraisals assume 6% per annum for debit balances. No allowance has been made for any equity provided by the developer.
120. In line with the updated PPG, the developers' return has been assessed as 17.5% of gross development value (GDV), which is in the middle of the suggested range.
121. On the whole, it is assumed a maximum, per outlet, delivery rate of 50 units per year. On a site with 35% affordable housing this equates to about 33 market units per year. On the smaller sites, we have assumed much slower rates to reflect the nature of the developer likely to be bringing smaller sites forward. These assumptions are conservative but do, properly, reflect current practice. This approach is in line with the PPG and Harman Guidance.

³⁰ i.e. suburban residential development.

Acquisition costs

122. An allowance of 1.5% for acquisition agents' and legal fees has been made. Stamp duty is calculated at the prevailing rates.

Disposal costs

123. For the market and affordable housing, sales and promotion, alongside legal fees, are assumed to amount to some 3.5% of receipts. For disposals of affordable housing, these figures can be reduced significantly depending on the category, so in fact the marketing and disposal of the affordable element is probably less expensive than this.

Planning Policy Requirements

124. In this assessment we have applied the policies set out in the Dacorum Borough Core Strategy 2006-2031 (adopted September 2013) and the various supporting Supplementary Planning Documents. These may well change as the plan-making process continues – in which case it may be necessary to revisit the findings.
125. In addition, we have assumed that the Nationally Described Space Standards and additional design standards (Accessible and Adaptable) apply.

7.4. Residential Appraisal Results

126. As detailed in Chapters 5 and 6 above, potential sites were 'sifted' to assess their suitability for development. To make an assessment of deliverability, we have modelled a set of sites that are representative of the sites considered to be potentially suitable for allocation with minor or major constraints.
127. The appraisals use the residual valuation approach – i.e. they assess the value of a site after taking into account the costs of development, the likely income from sales and/or rents and a developers' return. The Residual Value represents the maximum bid for a site where the payment is made in a single tranche on the acquisition of a site. In order for the proposed development to be viable, it is necessary for this Residual Value to exceed the EUV by a satisfactory margin, being the Benchmark Land Value (BLV).

Base Appraisals – full policy requirements

128. Separate appraisals have been run for the specific sites and the viability case studies (i.e. the typologies). These appraisals are based on the full 'policy on' assumptions.

These include:

- a) Affordable Housing: 35% as 75% Affordable rent and 25% Intermediate housing;
- b) Environmental Standards: Enhanced standards as per the emerging policy requirements for nationally described space standards (NDSS) and Part M of Building Regulations; and
- c) CIL and s106: £1,500 per unit (Market and Affordable) s106 plus CIL at prevailing rate.

129. The residual values generated by the modelled sites vary across the Dacorum area, as we would expect. In all cases these are very substantial values, ranging upwards from a minimum of £1,125,000/ha.
130. These results in themselves do not provide a good indication of site viability as they are simply an indication of the amount a developer might pay for the land. To test the development viability of these sites, we have compared the residual value with the Viability Thresholds as shown in the following table.

Table 8: Residual Values compared to Viability Threshold under full policy requirements (£/ha)³¹

Site name	Settlement	Alternative Use Value	Viability Threshold	Residual Value
South Berkhamsted Urban Extension	Berkhamsted	25,000	625,000	2,264,175
Land East of Darrs Lane	Berkhamsted	25,000	625,000	2,222,927
Shendish Manor & Fairfields	H Hempstead	25,000	625,000	1,580,346
Land east of Tring	Tring	25,000	625,000	1,190,565
New Mill	Tring	25,000	625,000	2,002,204
East of Berkhamsted	Berkhamsted	25,000	625,000	2,128,634
North and North East of Hemel	H Hempstead	25,000	625,000	1,178,957
Polehanger Lane	H Hempstead	25,000	625,000	1,487,530
Pouchen End Lane	H Hempstead	25,000	625,000	2,240,831
Wayside Farm, Middle Farm & A4251	Tring	25,000	625,000	1,367,796
A Berkhamsted	Zone 1	25,000	625,000	2,860,060
A Berkhamsted - Brownfield	Zone 1	1,800,000	2,160,000	2,641,714
C Bovingdon	Zone 1	25,000	625,000	2,996,967
D Hemel Hempstead	Zone 1	25,000	625,000	3,787,159
D Hemel Hempstead - Brownfield	Zone 1	1,800,000	2,160,000	3,498,406
E Markyate	Zone 1	25,000	625,000	4,014,917
F Tring	Zone 1	25,000	625,000	3,403,124
A Berkhamsted	Zone 2	25,000	625,000	1,775,757
A Berkhamsted - Brownfield	Zone 2	1,800,000	2,160,000	1,508,477
C Bovingdon	Zone 2	25,000	625,000	1,859,403
D Hemel Hempstead	Zone 2	25,000	625,000	2,357,994
D Hemel Hempstead - Brownfield	Zone 2	1,800,000	2,160,000	2,004,475
E Markyate	Zone 2	25,000	625,000	2,559,172
F Tring	Zone 2	25,000	625,000	2,108,926
A Berkhamsted	Zone 3	25,000	625,000	1,992,079
A Berkhamsted - Brownfield	Zone 3	1,800,000	2,160,000	1,773,733
C Bovingdon	Zone 3	25,000	625,000	2,085,640
D Hemel Hempstead	Zone 3	25,000	625,000	2,647,276
D Hemel Hempstead - Brownfield	Zone 3	1,800,000	2,160,000	2,358,522
E Markyate	Zone 3	25,000	625,000	2,845,987
F Tring	Zone 3	25,000	625,000	2,355,143

Source: HDH (November 2019)

131. Across the Borough, the Residual Value exceeds the BLV, indicating that sites are likely to be viable. The exception is in relation to the Typology A – Brownfield case studies in the two lower value zones (CIL Zone 2 and CIL Zone 3) and Typology D in Zone 2. This is for two reasons. Firstly, the costs associated with brownfield sites are

³¹ Note that Table 8 presents the results of a modelling exercise whereby sites are tested for their hypothetical viability across a range of circumstances. This explains why sites in the second half of the table are tested within brownfield scenarios, even though the actual sites themselves are wholly or largely greenfield rather than brownfield land.

greater, and, secondly, the BLV is based on an industrial use, which is higher than for greenfield sites.

132. We would suggest that the Council is cautious about including such sites in a Plan without further viability work to confirm deliverability. For this reason, it would be prudent for the Council to engage with relevant developers and landowners before relying on these sites to deliver housing in the short to medium term. Such an approach would be fully aligned with the Harman Guidance, which states: *“Landowners and site promoters should be prepared to provide sufficient and good quality information at an early stage, rather than waiting until the development management stage. This will allow an informed judgement by the planning authority regarding the inclusion or otherwise of sites based on their potential viability.”*
133. In this context the PPG should also be highlighted³²: *“... It is the responsibility of site promoters to engage in plan making, take into account any costs including their own profit expectations and risks, and ensure that proposals for development are policy compliant. Policy compliant means development which fully complies with up to date plan policies. A decision maker can give appropriate weight to emerging policies. The price paid for land is not a relevant justification for failing to accord with relevant policies in the plan. Landowners and site purchasers should consider this when agreeing land transactions.”*
134. The appraisals carried out in this viability assessment proceed from the base policy requirements and the adopted rates of CIL. The delivery of large sites can put considerable stress on the local infrastructure; however, at the time of writing, detailed assessment of the strategic infrastructure and mitigation requirements for each site has not yet taken place. This is considered further below. In addition, the Council has an aspiration to increase the affordable housing target from 35% to 40%, this is also considered.

Varied Developer Contributions

135. The above analysis assumes the full ‘policy on’ scenario including the current rates of CIL and s106 contributions at £1,500/unit. The appraisals have been rerun with developer contributions (combined s106 and CIL) of up to £50,000/unit.
136. The analysis indicates that, on the whole, there is capacity for substantial developer contributions, the exception being the brownfield sites where the capacity is less.
137. The Council is considering increasing its affordable housing target from the current 35% to 40%. It will be commissioning further viability work to assess the implications of this change in more detail in due course.
138. If the affordable housing requirement were 40% rather than 35%, the Residual Value would be about £150,000/ha less. This is a substantial difference that would be broadly equivalent to £5,000/unit in developer contributions. Prior to knowing the site-specific infrastructure requirements, however, it would be premature to make firm recommendations in this regard.
139. Nevertheless, as in the 35% scenario, the analysis indicates that, on the whole, there is capacity for substantial developer contributions, the exception being the brownfield sites where the capacity is less.

7.5. Employment Sites Appraisal Results

140. A set of development financial appraisals has also been run for non-residential development.

³² <https://www.gov.uk/guidance/viability>

141. The Site Assessment Study also covers land for employment use. The analysis does not, however, extend to the precise type of employment development that may or may not be appropriate on each site and in what mix. In order to provide useful advice, the employment sites analysis is based on several components that could be mixed if the sites were to come forward.
142. To a large extent, the results of the analysis are reflective of the current market in the Borough, and more widely. Whilst office development is not shown as viable, it is nevertheless coming forward on the ground. Similarly, industrial development is shown as being unviable.
143. It is notable that agents operating in the local market have reported that over the last twenty-four or so months that there has been a change in sentiment and an improvement in the market, and that this is expected to continue.
144. The analysis in this report, in line with the Harman Guidance and in the context of the NPPF and PPG, assumes that development takes place for its own sake and is a goal in its own right. It assumes that a developer buys land, develops it and then disposes of it, in a series of steps with the sole aim of making a profit from the development. However, that Guidance does not necessarily reflect the broad range of business models under which developers and landowners operate.
145. For example, some developers have owned land for many years and are building a broad income stream over multiple properties over the long term. Such developers are able to release land for development at less than the arms-length value at which it may be released to third parties and take a long-term view as to the direction of the market based on the prospects of an area and wider economic factors. Much of the development coming forward in the area is 'user led', being brought forward by businesses that will use the eventual space for operational uses, rather than for investment purposes.

7.6. Deliverable Sites

146. Based on the analysis in the high-level viability study forming Volume 4 of the Site Assessment Study, the Council can be confident that greenfield sites are most likely to be deliverable and have capacity to bear developer contributions over and above CIL. The viability of brownfield sites is less certain, particularly in the lower value areas. The Council should be cautious before allocating these.
147. The larger sites have capacity to bear developer contributions (s106 and CIL) of over £40,000/unit. In due course, with further work to establish the strategic infrastructure and mitigation requirements of the larger sites, it is recommended that further consideration be given as to how developer contributions are best collected – through the s106 regime or under CIL.

8. Conclusions and Next Steps

8.1. Site assessment findings

148. This site assessment study comprises an independent, impartial and technically-focussed appraisal of the suitability, availability and achievability of 144 sites submitted to Dacorum Borough Council in recent years for residential or employment development. Conclusions on site suitability have been reached on the basis of high-quality evidence from a range of sources, alongside professional knowledge, experience and judgement.
149. The results of the study, which comprises part of the Borough’s evidence base rather than planning policy, will inform Dacorum’s decisions on site allocations and housing supply in the forthcoming Local Plan.
150. The overall conclusion of the study on site suitability is that of the 144 sites assessed, 65 could be sifted out on a variety of technical and town planning criteria in the initial filtering and Phase 1 assessment, with 79 sites proceeding to the more detailed Phase 2 assessment.
151. Of these 79 sites, 33 were considered unsuitable for allocation for a variety of reasons, set out in full in Volume 3 of this report. As set out in the same volume, 46 sites were considered potentially suitable for allocation. Of the 46 sites considered potentially suitable for allocation, 34 are considered suitable with major constraints and 12 suitable with minor constraints. These are illustrated in Figure 2 below- note that Figure 2 does not illustrate the location of unsuitable sites, though those found unsuitable at Phase 2 are mapped individually in Volume 3 of this study.
152. The total land area considered potentially suitable for residential or employment allocation comprises 776.14 hectares, collectively offering the potential for 15,135 new dwellings and 6,000 square metres of new employment space. This potential can be broken down further by category, as illustrated in Table 9 below.

Table 9: Capacity of land potentially suitable for residential or employment allocation across Dacorum (total)

	Land potentially suitable for allocation with minor constraints	Land potentially suitable for allocation with major constraints	Total land potentially suitable for allocation
Residential development (dwellings)	1,586	13,606	15,192
Employment development (square metres)	6,000	0 ³³	6,000

Source: AECOM calculations

³³ Note that this does not mean there is no capacity for employment development on land potentially suitable for allocation with major constraints- there is, for example in large-scale urban extensions that have been assessed at a ‘town-wide’ density of 17.5 dwellings per hectare. It simply means there are no sites in this category suitable for employment development only.

Table 10: Capacity of land potentially suitable for residential or employment allocation across Dacorum (by settlement)

	Land potentially suitable for allocation with minor constraints (dwellings except where stated)	Land potentially suitable for allocation with major constraints (dwellings)	Total land potentially suitable for allocation (dwellings except where stated)	Percentage of total capacity by settlement (dwellings except where stated)
Hemel Hempstead	12	7,460	7,472	49.18%
Berkhamsted	760	2,111	2,871	18.90%
Tring	367	2,420	2,787	18.35%
Bourne End	6000 sq. m employment floorspace	0	0	0% (100% of employment capacity)
Bovingdon	364	146	510	3.36%
Chipperfield	0	0	0	0%
Flamstead	0	0	0	0%
Great Gaddesden	0	21	21	0.14%
Kings Langley	14	1,232	1,246	8.20%
Long Marston	12	0	12	0.08%
Markyate	0	170	170	1.12%
Potten End	0	0	0	0%
Wilstone	57	46	103	0.68%

Source: AECOM calculations

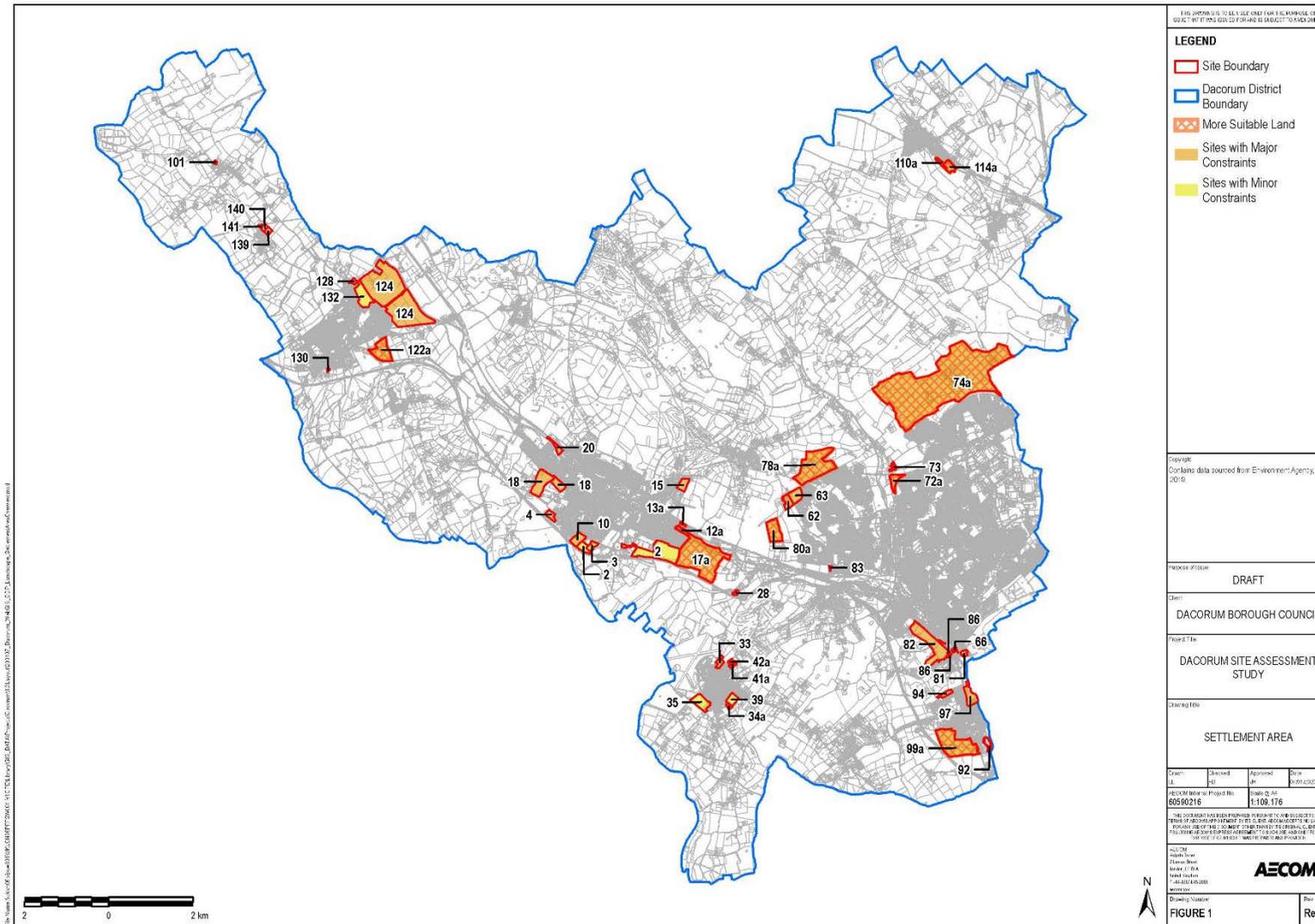
153. Hypothetical density uplifts of 25% and 50% can be applied to the capacities set out in Table 9 above for the purposes of illustration, while noting the numerous caveats that would apply based on the site constraints outlined in detail in Volume 3. The results of applying such uplifts are set out in Table 11 below.

Table 11: Capacity of land potentially suitable for residential or employment allocation across Dacorum with density uplifts applied

	Residential development (dwellings)	Employment development (square metres)
Potentially suitable for allocation with minor constraints (25% density uplift applied)	1,982	7,500
Potentially suitable for allocation with minor constraints (50% density uplift applied)	2,379	9,000
Potentially suitable for allocation with major constraints (25% density uplift applied)	17,007	0
Potentially suitable for allocation with major constraints (50% density uplift applied)	20,409	0
Total potentially suitable for allocation (25% density uplift applied)	18,989	7,500
Total potentially suitable for allocation (50% density uplift applied)	22,788	9,000

Source: AECOM calculations

Figure 2: Location of all sites considered to be potentially suitable for residential or employment allocation



Source: AECOM, Dacorum Borough Council

154. This study, like all appraisals of site suitability, availability and achievability, can only ever comprise a snapshot in time. As such, there is potential for further site-specific technical work to progress, and for policy and guidance to change, which in turn would change conclusions about site suitability. Sites currently assessed as less suitable could therefore be deemed as more suitable in future assessments and vice versa. It will be for DBC to assess these factors in conjunction with further engagement with key stakeholders as it progresses technical work on preferred sites in the Local Plan.
155. The study's overall conclusion on availability is that, at the time of writing, and based on evidence provided by Dacorum Borough Council to AECOM, all of the sites assessed for suitability remain available for development. The assessment of suitability and availability was complemented by an assessment of site achievability and viability provided by HDH, AECOM's sub-contractors, which is set out in Volume 4 of this study, with a summary of findings in Chapter 7 above.
156. The same caveat about the study being a snapshot in time and therefore site attributes having the potential to change in future also applies to the assessments of availability, achievability and site infrastructure requirements and costs.

8.2. Next steps

157. There are a number of potential next steps arising from this study. The first and most obvious is for Dacorum Borough Council to use its conclusions to assist in the decision-making process for which sites to allocate for residential and/or employment development in the emerging Local Plan.
158. The decision on site allocations will then be subject to a publicity period (known as a Regulation 19 Consultation) on the Local Plan. At this stage, the Council considers the Local Plan evidence to be robust and soundly based and as such, it is not expected to be subject to another round of updates/amendments before the Local Plan Examination in Public.
159. It should also be noted that while the site assessment exercise considered transport data from a range of relevant sources, detailed transport modelling of its conclusions has not been carried out. As such, modelling the transport impacts of developing some or all of the land recommended as suitable for allocation by this report is a further necessary next step to help inform the Council's Site Allocations process.
160. Decisions on which sites to allocate in the Local Plan should be informed by careful consideration of site phasing, itself informed by the evidence presented in this study. In so doing, the Council will aim to develop a realistic trajectory for housing supply over the Plan period which is able to meet Dacorum's Objectively Assessed Need (OAN), in appropriate consultation with infrastructure providers.
161. In line with national policy on assessing the supply of land for development, this study did not consider the demand-side evidence- this means that no upper limit (or 'cap') on growth or capacity has been applied. As such, AECOM's assessment may have identified either a surplus or a deficit of land/sites required for residential or employment development over the Plan period, depending on the most recent assessment of need.
162. The Borough Council must therefore now bring together the supply and demand-side evidence bases to determine the relationship between the two and then decide on the next steps in the Local Plan process, depending on the extent to which supply of housing land meets demand.

Appendix A - Summary table of assessment results for all sites

Site number for study purposes	Site name	Nearest settlement	Study volume covering site in most detail	Gross site area (ha.)	Site size filter	Site overlap filter	Planning permission/ allocation filter	Site merge filter	Phase 1 assessment filter	Phase 2 assessment filter ³⁴	Suitable sites- major constraints ³⁵	Suitable sites- minor constraints ³⁶	Design case study	Site capacity (dwellings/ applied floorspace)
5	Darrs Lane and St Mary's Avenue, Northchurch	Berkhamsted	Volume 1	0.05	Below 0.3 hectares									
8	Land at Castle Gateway, Castle Hill	Berkhamsted	Volume 1	0.28	Below 0.3 hectares									
24	The Lodge, Woodcock Hill	Berkhamsted	Volume 1	0.16	Below 0.3 hectares									
70	Land at Ridgeway Close	Hemel Hempstead	Volume 1	0.24	Below 0.3 hectares									
76	Woodhall, Woodhall Lane	Hemel Hempstead	Volume 1	0.09	Below 0.3 hectares									
79	Pouchen End Hall, Pouchen End Lane	Hemel Hempstead	Volume 1	0.01	Below 0.3 hectares									

³⁴ Note that in many cases the constraint assessed is merely the most significant of many.

³⁵ Where a site is considered suitable for allocation with major constraints, the area considered suitable for allocation is given in this column in hectares.

³⁶ Where a site is considered suitable for allocation with minor constraints, the area considered suitable for allocation is given in this column in hectares.

Site number for study purposes	Site name	Nearest settlement	Study volume covering site in most detail	Gross site area (ha.)	Site size filter	Site overlap filter	Planning permission/ allocation filter	Site merge filter	Phase 1 assessment filter	Phase 2 assessment filter ³⁴	Suitable sites- major constraints ³⁵	Suitable sites- minor constraints ³⁶	Design case study	Site capacity (dwellings/ applied floorspace)
85	127 Hempstead Road	Kings Langley	Volume 1	0.24	Below 0.3 hectares									
96	Love Lane	Kings Langley	Volume 1	0.28	Below 0.3 hectares									
109	Land north of Pickford Road and Friendless Lane	Markyate	Volume 1	0.22	Below 0.3 hectares									
116	Iona, Vicarage Road	Potten End	Volume 1	0.08	Below 0.3 hectares									
123	Ivy Cottage Station Road	Tring	Volume 1	0.01	Below 0.3 hectares									
137	Woodside, Chesham Road	Wigginton	Volume 1	0.06	Below 0.3 hectares									
11	Ivy House Lane	Berkhamsted	Volume 1	5.24		Overlaps with 15								
21	London Road	Berkhamsted	Volume 1	3.9		Overlaps with 12								

Site number for study purposes	Site name	Nearest settlement	Study volume covering site in most detail	Gross site area (ha.)	Site size filter	Site overlap filter	Planning permission/ allocation filter	Site merge filter	Phase 1 assessment filter	Phase 2 assessment filter ³⁴	Suitable sites- major constraints ³⁵	Suitable sites- minor constraints ³⁶	Design case study	Site capacity (dwellings/ applied floorspace)
50	Land to south of Chapel Croft	Chipperfield	Volume 1	1.28		Overlaps with 49								
77	126 Oatfield, Dodds Lane, Piccotts End	Hemel Hempstead	Volume 1	3.23		Overlaps with 74								
95	Land south of Trout Lake Bungalow/Gaywood Land	Kings Langley	Volume 1	1.88		Overlaps with 92								
105	Land South of Markyate	Markyate	Volume 1	32.19		Overlaps with 110								
108	Land East of Pickford Road	Markyate	Volume 1	2.43		Overlaps with 112								
143	Camelot Rugby Club, Chaulden Lane	Hemel Hempstead	Volume 1	0.42		Overlaps with 83								
7	Durrants Lane and Shootersway	Berkhamsted	Volume 1	3.24			Site allocation							
75	Grovehill Local Centre (Henry Wells Square)	Hemel Hempstead	Volume 1	1.44			In urban area							

Site number for study purposes	Site name	Nearest settlement	Study volume covering site in most detail	Gross site area (ha.)	Site size filter	Site overlap filter	Planning permission/ allocation filter	Site merge filter	Phase 1 assessment filter	Phase 2 assessment filter ³⁴	Suitable sites- major constraints ³⁵	Suitable sites- minor constraints ³⁶	Design case study	Site capacity (dwellings/ applied floorspace)
90	West Meon, 46 Langley Hill	Kings Langley	Volume 1	0.39			Planning permission							
91	Land adjacent to Coniston Road	Kings Langley	Volume 1	0.38			Planning permission							
127	Land South of Aylesbury Road	Tring	Volume 1	18.75			Site allocation							
144	Land south of Laidon Square, Hemel Hempstead	Hemel Hempstead	Volume 1	0.68			Planning permission							
9	Land adj. Chesham Road, south of Ashlyns School	Berkhamsted	Volume 1	2.59				Merged with 2						
36	Grange Farm Extension	Bovingdon	Volume 1	1.25				Merged with 35						
6	Demeath, Shootersway	Berkhamsted	Volume 1	0.99					Open countryside					
14	Land at Darfields, Shootersway/Darrs Lane	Berkhamsted	Volume 1	1.12					100% of site in AONB					
19	Land off Pea Lane	Berkhamsted	Volume 1	7.29					100% in AONB					

Site number for study purposes	Site name	Nearest settlement	Study volume covering site in most detail	Gross site area (ha.)	Site size filter	Site overlap filter	Planning permission/ allocation filter	Site merge filter	Phase 1 assessment filter	Phase 2 assessment filter ³⁴	Suitable sites- major constraints ³⁵	Suitable sites- minor constraints ³⁶	Design case study (applied)	Site capacity (dwellings/ floorspace)
22	New Road	Berkhamsted	Volume 1	14.42					89% in AONB					
25	Land adj. A41, Bourne End (Amen Corner)	Bourne End	Volume 1	0.47					Open countryside					
26	Land south of Bourne End/adj. A41	Bourne End	Volume 1	1.96					Open countryside					
27	Kingsway, London Road	Bourne End	Volume 1	0.71					Open countryside					
29	Land East of Sugar Lane	Bourne End	Volume 1	3.63					Open countryside					
30	Land north of Stoney Lane	Bourne End	Volume 1	6.7					Open countryside					
31	Land off Upper Bourne End Lane	Bourne End	Volume 1	15.85					Open countryside					
32	Stoney Lane	Bourne End	Volume 1	10.33					Open countryside					
37	Hempstead Road and Stoney Lane	Bovingdon	Volume 1	6.93					Open countryside					

Site number for study purposes	Site name	Nearest settlement	Study volume covering site in most detail	Gross site area (ha.)	Site size filter	Site overlap filter	Planning permission/ allocation filter	Site merge filter	Phase 1 assessment filter	Phase 2 assessment filter ³⁴	Suitable sites- major constraints ³⁵	Suitable sites- minor constraints ³⁶	Design case study (applied)	Site capacity (dwellings/ floorspace)
38	Highcroft Paddocks	Bovingdon	Volume 1	0.38					Open countryside					
43	Maple Farm, Shantock Lane	Bovingdon	Volume 1	3.4					Open countryside					
44	The Yard, Middle Lane	Bovingdon	Volume 1	1.67					Open countryside					
45	Land adj. Crown and Sceptre	Bridens Camp	Volume 1	0.41					Open countryside					
52	Land SE of Mini dealership	Cow Roast	Volume 1	0.94					Open countryside					
56	Land SE of Rose and Crown, Trowley Bottom	Flamstead	Volume 1	0.91					100% in AONB					
60	Land south of Flaunden Hill	Flaunden	Volume 1	1.61					Open countryside					
65	Holtsmere End Farm	Hemel Hempstead	Volume 1	33.51					Open countryside					
68	Land adjacent to Hay Lodge, London Road	Hemel Hempstead	Volume 1	0.94					Open countryside					

Site number for study purposes	Site name	Nearest settlement	Study volume covering site in most detail	Gross site area (ha.)	Site size filter	Site overlap filter	Planning permission/ allocation filter	Site merge filter	Phase 1 assessment filter	Phase 2 assessment filter ³⁴	Suitable sites- major constraints ³⁵	Suitable sites- minor constraints ³⁶	Design case study (applied)	Site capacity (dwellings/ floorspace)
100	Land to west of Hoo House	Little Gaddesden	Volume 1	0.9					100% in AONB					
102	Land North of Buckwood Road	Markyate	Volume 1	3.73					100% in AONB					
103	Land South of Buckwood Road	Markyate	Volume 1	6.8					100% in AONB					
104	Cell Park Farm	Markyate	Volume 1	14.59					Open countryside					
111	Land south of Junction 10A M1	Markyate	Volume 1	15.7					Open countryside					
112	Land south-east of Markyate	Markyate	Volume 1	32.63		Site 108 overlaps with this site. Partial overlap with 110, rest of site progressed			100% in AONB					
119	Land East of Nettleden Road	Little Gaddesden	Volume 1	1.84					100% in AONB					

Site number for study purposes	Site name	Nearest settlement	Study volume covering site in most detail	Gross site area (ha.)	Site size filter	Site overlap filter	Planning permission/ allocation filter	Site merge filter	Phase 1 assessment filter	Phase 2 assessment filter ³⁴	Suitable sites- major constraints ³⁵	Suitable sites- minor constraints ³⁶	Design case study (applied)	Site capacity (dwellings/ floorspace)
120	Land adj. Myrtle Cottages north of Bulbourne Road	Tring	Volume 1	0.39					Open countryside					
121	Cow Lane-Station Road	Tring	Volume 1	2.65					100% in AONB					
125	Land north of Bulbourne Road	Tring	Volume 1	31.28					100% in AONB					
129	Land south of Park Road	Tring	Volume 1	3.6					100% in AONB					
131	Land south of Park Road /Hastoe Lane /Adj. A41	Tring	Volume 1	0.62					100% in AONB					
133	Land east of Woodland Close	Tring	Volume 1	1.34					100% in AONB					
134	Chesham Road, Site A	Wigginton	Volume 1	0.8					100% in AONB					
135	Chesham Road, Site B	Wigginton	Volume 1	1.79					100% in AONB					
136	Chesham Road, Site C	Wigginton	Volume 1	3.31					100% in AONB					

Site number for study purposes	Site name	Nearest settlement	Study volume covering site in most detail	Gross site area (ha.)	Site size filter	Site overlap filter	Planning permission/ allocation filter	Site merge filter	Phase 1 assessment filter	Phase 2 assessment filter ³⁴	Suitable sites- major constraints ³⁵	Suitable sites- minor constraints ³⁶	Design case study (applied)	Site capacity (dwellings/ floorspace)
138	Dixons Gap	Wilstone	Volume 1	1.82					Open countryside					
1	13-17 Oakwood	Berkhamsted	Volume 3	0.6						Transport				
16	Land Between Shootersway and A41 bypass	Berkhamsted	Volume 3	14.02						Green Belt				
23	Berkhamsted Golf Range, The Brickworks	Berkhamsted	Volume 3	4.3						Landscape				
40	Land between Vicarage Lane and Bobsleigh Hotel	Bovingdon	Volume 3	8.41						Green Belt				
46	49-51 Scatterdells Lane	Chipperfield	Volume 3	0.42						Development scale				
47	68-74 Scatterdells Lane	Chipperfield	Volume 3	0.3						Development scale				
48	Wyevale Garden Centre	Chipperfield	Volume 3	2.76						Development scale				

Site number for study purposes	Site name	Nearest settlement	Study volume covering site in most detail	Gross site area (ha.)	Site size filter	Site overlap filter	Planning permission/ allocation filter	Site merge filter	Phase 1 assessment filter	Phase 2 assessment filter ³⁴	Suitable sites- major constraints ³⁵	Suitable sites- minor constraints ³⁶	Design case study (applied)	Site capacity (dwellings/ floorspace)
49	Land north of Kings Lane	Chipperfield	Volume 3	1.8		Site 50 overlaps with this site				Green Belt				
51	Old Stables, Croft Lane	Chipperfield	Volume 3	1.28						Development scale				
53	Barn Field, Singlets Lane	Flamstead	Volume 3	1.73						Green Belt				
54	Bowling Green Stables	Flamstead	Volume 3	0.55						Green Belt				
55	Delmer End Lane	Flamstead	Volume 3	2.05						Green Belt				
57	Land west of Pound Farm	Flamstead	Volume 3	0.49						Green Belt				
58	Old Watling Street	Flamstead	Volume 3	0.49						Green Belt				
59	South of Trowley Heights	Flamstead	Volume 3	0.51						Green Belt				
64	Hendelayk, Roughdown Villas Road	Hemel Hempstead	Volume 3	0.34						Local Wildlife Site				

Site number for study purposes	Site name	Nearest settlement	Study volume covering site in most detail	Gross site area (ha.)	Site size filter	Site overlap filter	Planning permission/ allocation filter	Site merge filter	Phase 1 assessment filter	Phase 2 assessment filter ³⁴	Suitable sites- major constraints ³⁵	Suitable sites- minor constraints ³⁶	Design case study (applied)	Site capacity (dwellings/ floorspace)
67	Land adj. to Oakwood, Sheethanger Lane	Hemel Hempstead	Volume 3	1.07						Transport				
69	Land at Piccotts End	Hemel Hempstead	Volume 3	27.04						Multiple constraints				
71	Land East of A41 at Felden	Hemel Hempstead	Volume 3	5.61						Transport				
84	Stables Field Piccotts End Lane	Hemel Hempstead	Volume 3	1.04						Multiple constraints				
87	Abbots Rise	Kings Langley	Volume 3	0.66						Environment				
88	Barnes Lodge Field	Kings Langley	Volume 3	5.27						Multiple constraints				
93	Land at Rucklers Lane	Kings Langley	Volume 3	0.86						Environment				
98	Land at Rudolf Steiner School Langley Hill	Kings Langley	Volume 3	1.01						Multiple constraints				
106	Fields off Green Lane	Markyate	Volume 3	5.03						Green Belt				

Site number for study purposes	Site name	Nearest settlement	Study volume covering site in most detail	Gross site area (ha.)	Site size filter	Site overlap filter	Planning permission/ allocation filter	Site merge filter	Phase 1 assessment filter	Phase 2 assessment filter ³⁴	Suitable sites- major constraints ³⁵	Suitable sites- minor constraints ³⁶	Design case study (applied)	Site capacity (dwellings/ floorspace)
107	Hicks Road	Markyate	Volume 3	6.24						Transport				
110	Land South East of Pickford Road	Markyate	Volume 3	14.94						Multiple constraints				
113	Land West of Pickford Road	Markyate	Volume 3	1.02						Transport				
115	49 Hempstead Lane	Potten End	Volume 3	1.9						Green Belt				
117	Old Kiln Meadow	Potten End	Volume 3	3.51						Green Belt				
118	Water End Road	Potten End	Volume 3	0.34						Development scale				
126	Land north of Icknield Way	Tring	Volume 3	9.85						Green Belt				
142	Barnes Lodge Dower House Hempstead Road	Kings Langley	Volume 3	5.12						Multiple constraints				
4	Blegberry Gardens	Berkhamsted	Volume 3	3.51							3.51		A	74

Site number for study purposes	Site name	Nearest settlement	Study volume covering site in most detail	Gross site area (ha.)	Site size filter	Site overlap filter	Planning permission/ allocation filter	Site merge filter	Phase 1 assessment filter	Phase 2 assessment filter ³⁴	Suitable sites- major constraints ³⁵	Suitable sites- minor constraints ³⁶	Design case study applied	Site capacity (dwellings/ floorspace)
10	Haslam Playing Fields	Berkhamsted	Volume 3	6.56							6.56		C	144
12/12a	Land at Bank Mill (area reduced)	Berkhamsted	Volume 3	3.9		Site 21 overlaps with this site				Recommendation to reduce boundaries	2.67		A	56
13/13a	Land at Bank Mill Lane (adj. Heron Place) (area reduced)	Berkhamsted	Volume 3	0.8						Recommendation to reduce boundaries	0.38		A	8
15	Ivy House Lane	Berkhamsted	Volume 3	5.24		Site 11 overlaps with this site					5.24		A	110
17/17a	Land east of Berkhamsted (area reduced)	Berkhamsted	Volume 3	92.82						Recommendation to reduce boundaries	70.87		n/a- 17.5 dph	1,240
18	Land east of Darrs Lane	Berkhamsted	Volume 3	22.73							22.73		n/a- 17.5 dph	398
20	Lock Field, New Road, Northchurch	Berkhamsted	Volume 3	3.22							3.22		F	81

Site number for study purposes	Site name	Nearest settlement	Study volume covering site in most detail	Gross site area (ha.)	Site size filter	Site overlap filter	Planning permission/ allocation filter	Site merge filter	Phase 1 assessment filter	Phase 2 assessment filter ³⁴	Suitable sites- major constraints ³⁵	Suitable sites- minor constraints ³⁶	Design case study applied	Site capacity (dwellings/ floorspace)
33	Duckhall Farm	Bovingdon	Volume 3	3.29							3.29		C	72
34/34a	Fox Meadow (area reduced)	Bovingdon	Volume 3	2.21						Recommendation to reduce boundaries	1.11		C	24
41/41a	Land north of Vicarage Lane (area expanded)	Bovingdon	Volume 3	0.62						Recommendation to extend boundaries	1.15		C	25
42/42a	Land south of Hempstead Road (area expanded)	Bovingdon	Volume 3	0.9						Recommendation to extend boundaries	1.13		C	25
61/61a	Wyevale Garden Centre (area reduced)	Great Gaddesden	Volume 3	2.44						Recommendation to reduce boundaries	0.98		A	21
62	Fields End Farm	Hemel Hempstead	Volume 3	5.35							5.35		D	155
63	Fields End Lane	Hemel Hempstead	Volume 3	8							8		F	200
66	Land adj. Red Lion	Hemel Hempstead	Volume 3	1.06							1.06		D	31

Site number for study purposes	Site name	Nearest settlement	Study volume covering site in most detail	Gross site area (ha.)	Site size filter	Site overlap filter	Planning permission/ allocation filter	Site merge filter	Phase 1 assessment filter	Phase 2 assessment filter ³⁴	Suitable sites- major constraints ³⁵	Suitable sites- minor constraints ³⁶	Design case study applied	Site capacity (dwellings/ floorspace)
72/72a	Land south of Link Road /west of Fletcher Way (area reduced)	Hemel Hempstead	Volume 3	9.61						Recommendation to reduce boundaries	5.75		F	144
73	Marchmont Farm	Hemel Hempstead	Volume 3	1.5							1.5		D	44
74/74a	North and North-East of Hemel (area reduced)	Hemel Hempstead	Volume 3	406.69		Site 77 overlaps with this site				Recommendation to reduce boundaries	291.14		n/a- 17.5 dph	5,095
78/78a	Polehanger Lane (area reduced)	Hemel Hempstead	Volume 3	55.21						Recommendation to reduce boundaries	47.1		n/a- 17.5 dph	824
80/80a	Pouchen End Lane (area reduced)	Hemel Hempstead	Volume 3	102.81						Recommendation to reduce boundaries	14.4		F	360
81	Red Lion Lane	Hemel Hempstead	Volume 3	1.82							1.82		D	53
82	Shendish Manor and Fairfields	Hemel Hempstead	Volume 3	31.67							31.67		n/a- 17.5 dph	554

Site number for study purposes	Site name	Nearest settlement	Study volume covering site in most detail	Gross site area (ha.)	Site size filter	Site overlap filter	Planning permission/ allocation filter	Site merge filter	Phase 1 assessment filter	Phase 2 assessment filter ³⁴	Suitable sites- major constraints ³⁵	Suitable sites- minor constraints ³⁶	Design case study applied	Site capacity (dwellings/ floorspace)
89	Hill Farm	Kings Langley	Volume 3	9.32							9.32		C	205
92	Land at Grand Union Canal	Kings Langley	Volume 3	1.82		Site 95 overlaps with this site					1.82		C	40
94	Land North of Coniston Road	Kings Langley	Volume 3	2.84							2.84		C	62
97	Rectory Farm	Kings Langley	Volume 3	9.65							9.65		F	241
99/99a	Wayside Farm, Middle Farm and A4251 (area reduced)	Kings Langley	Volume 3	69.9						Recommendation to reduce boundaries	39.1		n/a- 17.5 dph	684
110/110a	Cotton Spring Farm (area reduced)	Markyate	Volume 3	32.19		Site 105 overlaps with this site			65% in AONB; remaining 9.51 ha progressed	Delete overlap with 110 and 114; recommendation to reduce boundaries	1.76		C	39

Site number for study purposes	Site name	Nearest settlement	Study volume covering site in most detail	Gross site area (ha.)	Site size filter	Site overlap filter	Planning permission/ allocation filter	Site merge filter	Phase 1 assessment filter	Phase 2 assessment filter ³⁴	Suitable sites- major constraints ³⁵	Suitable sites- minor constraints ³⁶	Design case study applied	Site capacity (dwellings/ floorspace)
114/114a	London Road (area reduced)	Markyate	Volume 3	6.25						Recommendation to reduce boundaries	5.03		E	131
122/122a	Dunsley Farm (area reduced)	Tring	Volume 3	37.25						Recommendation to reduce boundaries	16.4		n/a-17.5 dph	287
124	Land East of Tring	Tring	Volume 3	119.11							119.11		n/a-17.5 dph	2,084
128	Land south of Gannel Farm Bulbourne Road	Tring	Volume 3	1.38							1.38		E	39
130	Land south of Park Road /west of East Lodge	Tring	Volume 3	0.38							0.38		E	10
139	Grange Road	Wilstone	Volume 3	2.1							2.1		C	46
2	South Berkhamsted Urban Extension	Berkhamsted	Volume 3	38.12				Site 9 merged into this site				38.12	n/a-17.5 dph	667

Site number for study purposes	Site name	Nearest settlement	Study volume covering site in most detail	Gross site area (ha.)	Site size filter	Site overlap filter	Planning permission/ allocation filter	Site merge filter	Phase 1 assessment filter	Phase 2 assessment filter ³⁴	Suitable sites- major constraints ³⁵	Suitable sites- minor constraints ³⁶	Design case study applied	Site capacity (dwellings/ floorspace)
3	British Film Institute Archive, Kingshill Way	Berkhamsted	Volume 3	3.2								3.2	D	93
28	Land adjacent to A41 Service Area, Stoney Lane	Bourne End	Volume 3	1.12								1.12	B	Employment-6,000 sq. m
35	Grange Farm	Bovingdon	Volume 3	10.1				Site 36 merged into this site				10.1	F	252
39	Homefield	Bovingdon	Volume 3	5.07								5.07	C	112
83	Camelot Rugby Club, Chaulden Lane	Hemel Hempstead	Volume 3	0.42		Site 143 overlaps with this site						0.42	D	12
86	16-18 and 22 Rucklers Lane	Kings Langley	Volume 3	0.47								0.47	D	14
101	Land West of Long Marston	Long Marston	Volume 3	0.55								0.55	C	12
132	New Mill	Tring	Volume 3	14.7								14.7	F	367

Site number for study purposes	Site name	Nearest settlement	Study volume covering site in most detail	Gross site area (ha.)	Site size filter	Site overlap filter	Planning permission/ allocation filter	Site merge filter	Phase 1 assessment filter	Phase 2 assessment filter ³⁴	Suitable sites- major constraints ³⁵	Suitable sites- minor constraints ³⁶	Design case study applied	Site capacity (dwellings/ floorspace)
140	Lock Field, Tring Road	Wilstone	Volume 3	1.59								1.59	D	46
141	Tring Road	Wilstone	Volume 3	0.38								0.38	D	11

Appendix B - Detailed policy and evidence base review

1. Housing and distribution of development

National Planning Policy Framework (NPPF 2019)

The latest version of the NPPF at the time of writing was from February 2019. The document states that at its heart is a presumption in favour of sustainable development. Achieving sustainable development means that the planning system has three overarching objectives, which are interdependent and need to be pursued in mutually supportive ways; economic, social and environmental.

Specific points of relevance include the following paragraphs:

- **Paragraph 67:** Strategic policy-making authorities should have a clear understanding of the land available in their area through the preparation of a strategic housing land availability assessment. From this, planning policies should identify a sufficient supply and mix of sites, taking into account availability, suitability and likely economic viability.
- **Paragraph 68:** Small and medium sized sites can make an important contribution to meeting the housing requirement of an area. Local planning authorities should identify land to accommodate at least 10% of their housing requirement on sites no larger than one hectare unless strong reasons against this can be shown. Sub-division of large sites should be encouraged where this could help to speed up delivery.
- **Paragraph 72:** The supply of large numbers of new homes can often be best achieved through planning for larger scale development, such as new settlements or significant extensions to existing villages and towns, provided they are well located and supported by the necessary infrastructure and facilities.
- **Paragraph 79:** Planning policies and decisions should avoid the development of isolated homes in the countryside unless justified in line with specific circumstances outlined in the NPPF.
- **Paragraph 117:** Strategic policies should set out a clear strategy for accommodating objectively assessed needs, in a way that makes as much use as possible of previously-developed, or 'brownfield' land (except where this would conflict with other policies in the NPPF, including causing harm to designated sites of importance for biodiversity).
- **Paragraph 118:** Planning policies should promote and support the development of under-utilised land and buildings, especially if this would help to meet identified needs for housing where land supply is constrained, and available sites could be used more effectively.
- **Paragraph 123:** Where there is an existing or anticipated shortage of land for meeting identified housing needs, it is especially important that planning policies avoid homes being built at low densities and ensure that developments make optimal use of the potential of each site.

Adopted Core Strategy 2006-2031 (September 2013)

The key local policy document for Dacorum Borough Council is the adopted Core Strategy.³⁷ This will be replaced by the new Single Local Plan to 2036 when this is adopted (see below).

Policies with direct relevance for residential development include:

- **Policy CS1: Distribution of Development** - Scale and location of development will be in accordance with the following settlement hierarchy:
 - Hemel Hempstead will be the main centre for housing development;
 - Limited housing development will be focused in the market towns of Berkhamsted and Tring, and the large villages of Bovingdon, Kings Langley and Markyate.
 - Housing development will be restrained in small villages and the countryside.
- **Policy CS2: Selection of Development Sites** - Development sites within defined settlements will be chosen in the following order of priorities:
 1. Previously developed land and buildings;
 2. Areas of high accessibility; and
 3. Other land.
- **Policy CS4: The Towns and Large Villages** - in areas of open land, the primary planning purpose is to maintain open character. Development proposals will be assessed against relevant open land policies.
- **Policy CS7: Rural Area: Small-scale development for housing, employment and other purposes** - such development will be permitted at Aldbury, Long Marston and Wilstone, provided that it complies with Policy CS1 and CS2.
- **Policy CS21: Existing Accommodation for Travelling Communities** - existing pitches, plots and mooring basins will be safeguarded from alternative development.

Core Strategy **Table 1** sets out the following settlement hierarchy:

³⁷ Available at <http://www.dacorum.gov.uk/docs/default-source/strategic-planning/adopted-core-strategy-2013.pdf?sfvrsn=2>

Table 1: Settlement Hierarchy			
Areas where Development will be Concentrated			
1.	Main Centre for Development and Change	Hemel Hempstead	Hemel Hempstead will be the focus for housing development within the borough, providing sufficient new homes to meet the natural growth of its population. The town will also accommodate substantial employment growth. The regeneration of the Maylands Business Park will continue, assisted by an Area Action Plan. Particular emphasis will be placed upon creating an attractive and vibrant town centre through further regeneration and redevelopment. Its new town neighbourhood structure will be reinforced and enhanced. Substantial improvements will be made to the image and quality of the New Town's built environment and public spaces.
Areas of Limited Opportunity			
2.	Market town	Berkhamsted Tring	Market towns and larger villages have an important role in meeting housing needs and providing employment opportunities and services, both for their residents and adjacent rural communities. The general approach in these locations will be to support development that enables the population to remain stable, unless a small element of growth is required to support local community needs.
3.	Large Village	Bovingdon Kings Langley Markyate	
Areas of Development Restraint			
4.	Small Village within the Green Belt	Chipperfield Flamstead Potten End Wigginton	These are the least sustainable areas of the borough, where significant environmental constraints apply. These include areas of high landscape quality, such as the Chilterns Area of Outstanding Natural Beauty, and the countryside between settlements. This needs to be protected to ensure its rural character is retained and settlements keep their separate identities.
	Small Village within the Rural Area	Aldbury Long Marston Wilstone	
5.	Other small villages and the countryside		

Source: Dacorum Borough Core Strategy 2013

Dacorum Site Allocations Masterplans (July 2017)

The Dacorum Site Allocations are an adopted Development Plan Document (DPD) which complements the Core Strategy and are a part of the statutory development plan.

The six largest sites allocated by the DPD in Dacorum in 2017 were each accompanied by a concept Masterplan. These masterplans provide gross density assumptions. The average gross density assumption across all masterplans is 18.85 dph.

The DPD shows that the larger a site, the lower its gross density in the concept masterplan. This is because larger sites include more land covered by non-residential uses required by any sustainable settlement, such as open space, employment areas, schools, hospitals, retail and so on. This is backed up by Census statistics on settlement densities³⁸.

Dacorum Borough Local Plan 1991-2011 Saved Policies (April 2004)³⁹

The adopted Core Strategy (2013) and Site Allocation DPD (2017) do not replace all of the policies contained within the Local Plan 1991-2011. Many of these policies have been 'saved' and will continue to inform planning policy until they are formally superseded or

³⁸ Available at <https://www.nomisweb.co.uk/census/2011/ks401ew>; whole settlement densities are calculated by dividing the total number of dwellings in the Built-Up Area (BUA) or Built-Up Area Sub-Division (BUASD) by the BUA/BUASD's area in hectares.

³⁹ Available at <http://www.dacorum.gov.uk/docs/default-source/strategic-planning/dacorum-borough-local-plan-adopted-2004---post-adoption-of-core-strategy-and-site-allocations-dpds.pdf?sfvrsn=2>

cancelled. Where they conflict with more recent national planning policy or guidance, NPPF and PPG take priority.

Saved policies relevant for housing are as follows:

- **Policy 10: Optimising the Use of Urban Land** - Vacant or underused land and buildings should be brought into appropriate use(s) as soon as practicable.
- **Policy 18: The Size of New Dwellings** - Development of a range of dwellings in size and type will be encouraged.
- **Policy 21: Density of Residential Development** – net densities are expected to be in the range of 30 to 50 dwellings per hectare. Lower net density should be avoided.

Grovehill Future Neighbourhood Plan (March 2017)

The study area includes one neighbourhood plan, Grovehill Future⁴⁰, which has now been adopted and thus forms part of the statutory development plan for Dacorum Borough.

Two Site Assessment Study sites are located within the neighbourhood plan boundary (site 144 and part of site 74) and development on these sites will have to have appropriate regard to the neighbourhood plan.

Emerging Local Plan- Issues and Options Consultation to 2036 (Nov 2017)

Dacorum Borough Council is currently in the process of preparing a new Local Plan for the borough. The first stage was the preparation of an Issues and Options document⁴¹, which looks at the planning challenges the Borough is facing up to 2036 and outlines broad options for how these could be addressed.

The role of the new Local Plan is to identify the best possible locations for future development and set out how important assets will be protected. Development locations should minimise impacts upon environment, make best use of existing infrastructure where possible, or identify location capable of being served by new infrastructure and services.

Sites will be allocated within the new Local Plan in line with their performance against the following criteria:

- A capacity of 10 or more units and/or a minimum of 0.3 ha in area;
- Not at an advanced stage in the planning application process;
- Available, suitable and achievable for development;
- Able to come forward in a timely and co-ordinated way by 2036; and
- Brownfield sites should be prioritised.

The draft new Local Plan also identifies locational principles for new growth:

- Maximise the use of brownfield land for development;
- Maximise the density of development, whilst ensuring it reflects local character;
- Support urban regeneration – particularly of Hemel Hempstead;
- Develop at well-connected, sustainable locations;
- Avoid areas at high risk of flooding;
- Respect the character of the existing settlement pattern and restrict urban sprawl;
- Protect the character and value of important landscapes, heritage and biodiversity;

⁴⁰ Neighbourhood plan available at [https://www.dacorum.gov.uk/docs/default-source/regeneration/grovehill-future-neighbourhood-plan---examination-version-\(pdf\).pdf?sfvrsn=0](https://www.dacorum.gov.uk/docs/default-source/regeneration/grovehill-future-neighbourhood-plan---examination-version-(pdf).pdf?sfvrsn=0)

⁴¹ Available at <https://www.dacorum.gov.uk/docs/default-source/strategic-planning/local-plan---issues-and-options---consultation-final---13-november-2017.pdf?sfvrsn=21>

- Ensure that new development can be served by necessary infrastructure; and
- Ensure development supports the delivery of a five-year housing land supply.

South West Hertfordshire Strategic Housing Market Assessment (February 2016)

The 2016 South West Herts Strategic Housing Market Assessment (SHMA)⁴² concluded that Dacorum has an Objectively-Assessed Need (OAN) of 756 dwellings per year over the period 2013 to 2036. It acts as a strong driver of the Site Assessment Study, which has the key purpose of helping the Borough Council understand the extent to which this high level of need for new housing can be met within Dacorum's own boundaries.

The SHMA also concluded that across the South West Herts Housing Market area, there is a need for around 15% 1-bed, 30% two bed, 40% three bed and 15% four bed dwellings.

An SHMA update has been commissioned but was not yet available at the time of writing.

Settlement Hierarchy Study (October 2017)

The Dacorum Settlement Hierarchy Study⁴³ informs the approach of the emerging Dacorum Borough Local Plan to the geographical distribution of development, i.e. the emerging replacement for Core Strategy Table 1 shown above. Its conclusions, which this study has full regard to, are based on an accessibility audit. The outcomes are as follows:

- Hemel Hempstead, Berkhamsted and Tring: High Accessibility
- Bovingdon, Kings Langley and Markyate: Fair Accessibility
- Chipperfield, Long Marston, Wilstone: Poor Accessibility
- Aldbury, Potten End: Low Accessibility

Settlement Profiles Paper (October 2017)

The Dacorum Settlement Profiles Paper⁴⁴ provides a range of key baseline information on all settlements across Dacorum with more than three hundred inhabitants and has been drawn on throughout this study as appropriate. It is particularly relevant in terms of showing settlement-specific constraints and opportunities for housing and employment growth. DBC have used this in support of the Settlement Hierarchy Study.

2. Economics and Employment

National Planning Policy Framework (2019)

Specific points of relevance include: **Paragraph 82:** Planning policies and decisions should recognise and address the specific locational requirements of different sectors. This includes making provision for clusters or networks of knowledge and data-driven, creative or high technology industries; and for storage and distribution operations at a variety of scales and in suitably accessible locations.

Adopted Core Strategy 2006-2031 (September 2013)

Policies with relevance for economic development include: **Policy CS14: Economic Development** - Sufficient land will be allocated to accommodate growth in the economy of approximately 10,000 jobs between 2006 and 2031. Most employment generating development will be located in town and local centres and General Employment Areas in

⁴² Available at <https://www.hertsmere.gov.uk/Documents/09-Planning--Building-Control/Planning-Policy/Local-Plan/SW-Herts-SHMA-Final-Report-Jan16.pdf>

⁴³ Available at <https://www.dacorum.gov.uk/docs/default-source/strategic-planning/settlement-hierarchy-study-main-report-october-2017.pdf?sfvrsn=4>

⁴⁴ Available at <https://www.dacorum.gov.uk/docs/default-source/strategic-planning/settlement-profiles-paper.pdf?sfvrsn=4>

accordance with Policies CS1 and CS4. Hemel Hempstead will be the main focus for new economic development uses.

Dacorum Borough Local Plan 1991-2011 Saved Policies (April 2004)

Policies with relevance for economic development include **Policy 34: Other Land with Established Employment Generating Uses** - Established employment generating sites in the Green Belt or the Rural Area which do not cause environmental problems and provide local employment opportunities will be protected from change to non-employment uses unless satisfactory replacement opportunities are provided.

Dacorum Employment Land Availability Assessment (October 2017)

The Dacorum Employment Land Availability Assessment (ELAA)⁴⁵ built on and added detail to the South West Hertfordshire Economic Study (below) by identifying eight specific sites in Dacorum with potential for future employment development. While some of these sites are within the scope of this study, in practice each of them had to be assessed against the use that they are being promoted for, which is residential development.

The refreshed Hertfordshire Strategic Economic Plan: 2017–2030 (July 2017)

Perfectly Placed for Business: the refreshed Hertfordshire Strategic Economic Plan (SEP)⁴⁶ replaced the previous SEP in 2017. Relevant points include the economic importance of improved east-west connections (e.g. the existing corridor of the A414 running through Hemel Hempstead) and therefore support for development at Hemel that could enhance east-west connectivity.

South West Hertfordshire Economic Study (February 2016)

This study⁴⁷ provides an economic baseline and growth scenarios for South West Hertfordshire. Its key purpose is to identify the scale and characteristics of plans for employment growth from 2013 to 2031 and 2036, and related land and floorspace requirements. An update to this study has been commissioned but was not yet available at the time of writing. The relevant conclusions for Dacorum included:

- an employment-led scenario is the preferred growth scenario;
- a high resultant demand in Dacorum for office and B8 industrial space (and therefore employment land) but a shrinking demand for manufacturing space;
- employment locations should take advantage of good access by road and public transport;
- if this growth scenario is to be achieved having regard to planning constraints across the study area, some new appropriately-located Green Belt sites will need to be developed for employment use.

3. Transport

National Planning Policy Framework (2019)

Specific points of relevance include the following paragraphs:

- **Paragraph 103:** Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes.

⁴⁵ Available at <https://www.dacorum.gov.uk/docs/default-source/strategic-planning/dacorum-employment-land-availability-assessment-october-2017.pdf?sfvrsn=6>

⁴⁶ Available at <https://www.hertfordshirelep.com/media/5417/hertfordshire-lep-sep-report-interactive.pdf>

⁴⁷ Available at <https://www.hertsmeire.gov.uk/Documents/09-Planning--Building-Control/Planning-Policy/Local-Plan/SW-Herts-Economy-Study-Feb16.pdf>

- **Paragraph 104:** Planning policies should support an appropriate mix of uses across an area, and within larger scale sites, to minimise the number of length of journeys needed for employment, shopping, leisure, education and other activities.
- **Paragraph 108:** In assessing sites that may be allocated for development, ensure that:
 - a) Safe and suitable access to the site can be achieved of all users; and
 - b) Any significant impacts from the development on the transport network or on highway safety can be cost-effectively mitigated to an acceptable degree.

Adopted Core Strategy 2006-2031 (September 2013)

Policies with direct relevance for transport include **Policy CS9: Management of Roads** - That the traffic generated from new development must be compatible with the location, design and capacity of the current and future operation of the road hierarchy, taking into account any planned improvements and cumulative effects of incremental developments. In villages and the countryside, special regard will be paid to the effect of new development and traffic on the safety and environmental character of country lanes.

Dacorum Borough Local Plan 1991-2011 Saved Policies (April 2004)

Policies with relevance for transport include:

- **Policy 51 Development and Transport Impacts:** Overall capacity in the main road network will be regarded as an important constraint on development proposals which would have a significant transport impact. Development must be compatible in locational and general highway planning, design and capacity terms with the current and future operation of the defined road hierarchy and road improvement strategy
- **Policy 79 Footpath Network and Policy 80 Bridleway Network:** The networks of public footpaths and public bridleways will be protected, improved and promoted.

Hertfordshire Local Transport Plan (May 2018)

The Local Transport Plan⁴⁸ seeks the following outcomes with relevance for Dacorum:

- Opportunities to reduce travel demand and the need to travel;
- New development located in areas served by, or with the potential to be served by, high quality passenger transport facilities and where key services can be accessed by walking and cycling;
- New accesses onto primary and main distributor roads only where special circumstances can be demonstrated in favour of the proposals;
- Resist development that would severely affect the rural or residential character of a road or other right of way;
- An east-west bus rapid transit scheme between Hemel Hempstead station and Welwyn Garden City, potentially serving park and ride sites on the edges of towns it serves;
- Support for the sustainable delivery of housing growth at Hemel Hempstead (West and East), and Berkhamsted.
- Support for economic growth locations, notably at Maylands Hemel Hempstead;

⁴⁸ Available at <https://www.hertfordshire.gov.uk/media-library/documents/about-the-council/consultations/ltp4-local-transport-plan-4-complete.pdf>

- Significant new transport infrastructure to support proposed development east of Hemel Hempstead.

2036 COMET Dacorum Local Plan Scenario (April 2018)

COMET comprises a structured evidence base for assessing transport policies and strategies across Hertfordshire. The purpose of the 2036 COMET Dacorum Local Plan Scenario⁴⁹ is to test the impacts on highways and public transport of the growth at Dacorum proposed through the emerging Local Plan. It supersedes older transport modelling work⁵⁰. Relevant conclusions for Dacorum include the following:

- There is a strong evidence base for the development of Site 74;
- Dacorum's highway network will suffer from delays and congestion in forecast scenarios;
- Areas of housing and employment growth should be fully linked by all transport modes;
- Bus services must integrate with employment hubs and the railway stations; demand for bus connections particularly in Hemel Hempstead and limited in other areas of the district;

Parking Standards Review (October 2017)

The review⁵¹ aims to update Dacorum's current parking standards (Appendix 5 of 2004 Dacorum Borough Local Plan) and will inform a forthcoming Parking Standards SPD. The review concludes that it is only in central Hemel Hempstead (which is outside the scope of this Site Assessment Study) that car-free development would be suitable, and thus infers that all sites assessed through this study will need to make provision to a greater or lesser extent by private car, even while at the same time seeking to maximise accessibility by public transport in line with other elements of the policy and evidence base.

4. Heritage

National Planning Policy Framework (2019)

Specific points of relevance include the following paragraph:

Paragraph 190: Local authorities should identify and assess the significance of any heritage assets that may be affected by a proposal and take this into account when considering impact of a proposal on a heritage asset to avoid and minimise conflict.

Paragraph 194: Any harm to, or loss of, the significance of a designated heritage asset should require clear and convincing justification.

Adopted Core Strategy 2006-2031 (September 2013)

Policies with direct relevance for heritage include **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.

Dacorum Borough Local Plan 1991-2011 Saved Policies (April 2004)

Policies with direct relevance include:

⁴⁹ Available at <https://www.dacorum.gov.uk/docs/default-source/strategic-planning/dacorum-2036-local-plan-scenario.pdf?sfvrsn=4>

⁵⁰ Available at <http://www.dacorum.gov.uk/docs/default-source/planning-development/strategicplanning-11-0-11dsistransportfinal.pdf?Status=Master&sfvrsn=0>, <https://www.hertfordshire.gov.uk/media-library/documents/highways/urban-transport-plans/tring/tring-northchurch-and-berkhamsted-urban-transport-plan-volume-1.pdf> and <http://www.dacorum.gov.uk/docs/default-source/planning-development/tr-10-hemel-hempstead-urban-transport-plan-2009.pdf>

⁵¹ Available at [https://www.dacorum.gov.uk/docs/default-source/strategic-planning/parking-standards-review-\(pdf-14-mb\).pdf?sfvrsn=2](https://www.dacorum.gov.uk/docs/default-source/strategic-planning/parking-standards-review-(pdf-14-mb).pdf?sfvrsn=2)

Policy 118 Important Archaeological Remains: Planning permission will not be granted for development which would adversely affect scheduled ancient monuments or other nationally important sites and monuments, or their settings. On archaeological sites or monuments of more local importance and their settings, physical preservation in situ will be the preferred option and applications may be refused.

Policy 119 Development Affecting Listed Buildings: Every effort will be made to ensure that any new development liable to affect the character of an adjacent listed building will be of such a scale and appearance that it will retain the character and setting of the listed building.

Policy 120 Development in Conservation Areas: There is a presumption against the demolition of any building that contributes to the character of a conservation area. Development proposals outside a conservation area which affect its character and setting will be considered likewise.

The supporting text to Policy 120 sets out the full schedule of conservation areas within Dacorum. This study has had full and appropriate regard to relevant policy affecting development within them or their setting.

Character appraisal and management proposals have been prepared for the conservation areas of Aldbury, Bovingdon, Chipperfield, Frithsden, Great Gaddesden and Nettleden, and conservation area reports prepared for Hemel Hempstead and Berkhamsted.⁵² These have been referenced as appropriate within the heritage assessment element of this study.

5. Landscape, agricultural land and geotechnical considerations

National Planning Policy Framework (2019)

Specific points of relevance include the following paragraphs and footnotes:

Paragraph 127: Planning policies and decisions should ensure that developments 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);

Paragraph 170: Planning policies and decisions should contribute to and enhance the natural and local environment by protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan), and recognising the intrinsic character and beauty of the countryside and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land;

Footnote 53: Where significant development of agricultural land is demonstrated to be necessary, areas of poorer quality land should be preferred to those of a higher quality;

Paragraph 172: Great weight should be given to conserving and enhancing landscape and scenic beauty in Areas of Outstanding Natural Beauty, which have the highest status of protection in relation to these issues. The conservation and enhancement of wildlife and cultural heritage are also important considerations in these areas. The scale and extent of development within these designated areas should be limited. Planning permission should be refused for major development other than in exceptional circumstances, and where it can be demonstrated that the development is in the public interest.

Footnote 55: For the purposes of paragraph 172, whether a proposal is ‘major development’ is a matter for the decision maker, taking into account its nature, scale and setting, and

⁵² All character appraisal and management proposals and conservation area reports listed are available at <http://www.dacorum.gov.uk/home/planning-development/planning-cons-design/conservation-areas>

whether it could have a significant adverse impact on the purposes for which the area has been designated or defined.

Paragraph 178: Planning policies should ensure that a site is suitable for its proposed use, taking account of ground conditions and any risks arising from land instability and contamination.

Adopted Core Strategy 2006-2031 (September 2013)

Policies with direct relevance for landscape, agricultural land and geotechnical considerations include **Policy CS24: The Chilterns Area of Outstanding Natural Beauty** - the special qualities of the Chilterns Area of Outstanding Natural Beauty will be conserved. The scarp slope will be protected from development that would have a negative impact upon its skyline.

Dacorum Borough Local Plan 1991-2011 Saved Policies (April 2004)

Policies with direct relevance include:

Policy 97 Chilterns Area of Outstanding Natural Beauty: In the Chilterns Area of Outstanding Natural Beauty the prime planning consideration will be the conservation of the beauty of the area; the economic and social well-being of the area and its communities will also be taken into account. Any development proposal which would seriously detract from this will be refused.

Policy 99 Preservation of Trees, Hedgerows and Woodlands: Encouragement will be given to the preservation of trees, hedgerows and woodlands (including old orchards) throughout the Borough. Where new development is proposed a high priority will be given to their retention and to their protection during development.

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.

Policy 108 High Quality Agricultural Land: Development which would result in the permanent loss of the best and most versatile agricultural land (classified by the Department for Environment, Food and Rural Affairs as being of Grades 1, 2 and 3a) will be refused, unless it can be demonstrated that there is an overriding need for the development and there is no alternative land of a lower quality which could reasonably be used.⁵³ Planning permission will not be granted for development which would fragment farm holdings unless mitigation is possible, e.g. the land can be incorporated into surrounding holdings and there is no severance of buildings from the land.

Policy 128 Protection of Mineral Resources: New building or development will not be permitted where it would unnecessarily sterilise or prejudice the extraction of known mineral resources.

Chilterns Area of Outstanding Natural Beauty Management Plan 2014-2019 (2015)

The vision for the Chilterns AONB Management Plan⁵⁴ is to conserve and enhance the natural beauty of the Chilterns AONB, increase its understanding and enjoyment, and to use the AONB to foster social and economic well-being. The following matters are of most relevance to our site assessment:

The setting of the Chilterns is valued and protected by ensuring development adjacent to the AONB respects its national importance;

⁵³ Note that these provisions on agricultural land are now superseded by the NPPF approach.

⁵⁴ Available at <http://www.dacorum.gov.uk/docs/default-source/strategic-planning/en1-chilterns-aonb-management-plan-2014-19.pdf?sfvrsn=0>

Potential impact of development surrounding the AONB needs to be given greater weight; Design and location to be sensitive to it; and

The impact of development adjacent to the AONB will be significant in many ways including its visibility from many popular sites. It is important that appropriate landscape and visual assessments are undertaken, particularly as the views both out of and back to the AONB are fundamental to the enjoyment of the AONB itself.

The setting of an AONB is not formally defined, either in Government policy or by the Chilterns AONB Management Plan. In some cases, the setting will be compact and close to the AONB boundary, perhaps due to natural or man-made barriers or because of the nature of the proposed development. However, the setting area may in some locations be substantial, for example where there is a contrast in topography between higher and lower ground.

Scale, height, siting, use, materials and design are factors that will determine whether a development affects the AONB setting. Incompatibility with surroundings, movement, reflectivity and colour are also likely to affect impact. It is also important to note that even if a development can avoid visual effects, it may introduce other impacts, such as on traffic levels, lighting, air quality or noise. Proposals have to be assessed on a case-by-case basis taking into account their location and characteristics.

The Chiltern Conservation Board has consulted on a review of the management plan (draft CAONB Management Plan 2019-2024) at the end of 2018.

Landscape Character Assessment for Dacorum (May 2004)

The Landscape Character Assessment (LCA) for Dacorum⁵⁵ has been adopted as a Supplementary Planning Document. Its aim was to classify all landscape types and boundaries for the purposes of advising on development control and policy development.

The LCA divides Dacorum into twenty-eight sub-areas for the purposes of landscape character assessment. For each of these sub-areas, the LCA sets out key characteristics and distinctive features, as well as a strategy and guidelines for managing change.

6. Green Belt

National Planning Policy Framework (2019)

Specific points of relevance for this study include:

Paragraph 136: Green Belt boundaries should only be altered where exceptional circumstances are fully evidenced and justified, through preparation or updating of plans.

Paragraph 137: Before concluding that exceptional circumstances exist to justify changes to Green Belt boundaries, the strategic policy-making authority should be able to demonstrate that it has examined fully all other reasonable options for meeting its identified need for development.

Paragraph 138: Where drawing up or reviewing Green Belt boundaries, the need to promote sustainable development should be taken into account. Strategic policy-making authorities should consider the consequences for sustainable development of channelling development towards urban areas inside the Green Belt boundary, towards towns and villages inset within the Green Belt or towards locations beyond the outer Green Belt boundary. Where it has been concluded that it is necessary to release Green Belt land for development, plans should give first consideration to land which has been previously developed and/or is well-served by public transport. They should also set out ways in which

⁵⁵ Available at http://web.dacorum.gov.uk/docs/default-source/planning-development/landscapecharassess_f01_frontcovercontents.pdf?sfvrsn=0

the impact of removing land from the Green Belt can be offset through compensatory improvements to the environmental quality and accessibility of remaining Green Belt land.

Paragraph 145: A local planning authority should regard the construction of new buildings as inappropriate in the Green Belt. Exceptions to this include:

- the provision of appropriate facilities (in connection with the existing use of land or a change of use) for outdoor sport, outdoor recreation, cemeteries and burial grounds and allotments; as long as the facilities preserve the openness of the Green Belt and do not conflict with the purposes of including land within it;
- the extension or alteration of a building provided that it does not result in disproportionate additions over and above the size of the original building;
- the replacement of a building provided the new building is in the same use and not materially larger than the one it replaces;
- limited infilling in villages;
- limited affordable housing for local community needs under policies set out in the development plan (including policies for rural exception sites); and
- limited infilling or the partial or complete redevelopment of previously developed land, whether redundant or in continuing use (excluding temporary buildings), which would:
 - not have a greater impact on the openness of the Green Belt than the existing development; or
 - not cause substantial harm to the openness of the Green Belt, where the development would re-use previously developed land and contribute to meeting an identified affordable housing need within the area of the local planning authority.

Paragraph 146: Certain other forms of development are also not inappropriate in the Green Belt provided they preserve its openness and do not conflict with the purposes of including land within it, including the re-use of buildings provided that the buildings are of permanent and substantial construction.

Adopted Core Strategy 2006-2031 (September 2013)

Policies with direct relevance for landscape, agricultural land and Green Belt include **Policy CS5 Green Belt** - The Council will apply national Green Belt policy to protect the openness and character of the Green Belt, local distinctiveness and the physical separation of settlements.

Green Belt Review – Stage 1 (November 2013) Stage 2, with Landscape Appraisal (January 2016)

The Dacorum, Green Belt Review took place in two stages. Stage 1⁵⁶ comprises a full Green Belt review (which was jointly undertaken with St Albans and Welwyn Hatfield), and Stage 2⁵⁷ includes a landscape appraisal. Stage 1 of the Review assessed all land parcels and assigned each one a rating of being either a significant, partial, limited or no contribution to Green Belt purposes. Relevant findings included:

- Twenty-one of the land parcels assessed are located in Dacorum;

⁵⁶ Available at <http://www.dacorum.gov.uk/home/planning-development/planning-strategic-planning/new-single-local-plan/technical-work-for-the-early-partial-review>

⁵⁷ Available at <http://www.dacorum.gov.uk/home/planning-development/planning-strategic-planning/new-single-local-plan/technical-work-for-the-early-partial-review>

- Five specific locations within Dacorum comprise land contributing least towards Green Belt purposes.
- The review also identifies locations where it considered that land within the Green Belt is 'less constrained', i.e. characterised by weaker Green Belt, less sensitive to change in landscape terms and affected by minimal constraints.

7. Environmental designations

National Planning Policy Framework (2019)

Specific points of relevance include the following paragraphs:

Paragraph 171: Plans should allocate land with the least environmental or amenity value, where consistent with other policies in the NPPF.

Paragraph 175: When determining planning applications, local planning authorities should apply the following principles:

- a) If significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- b) Development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it, should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest; and
- c) Development resulting in the loss or deterioration of irreplaceable habitats should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists.

Dacorum Borough Local Plan 1991-2011 Saved Policies (April 2004)

Policies with direct relevance include:

Policy 102 Sites of Importance to Nature Conservation: will be protected from development in accordance with their designation, value and scarcity. Proposals for development which may have an adverse effect, directly or indirectly, on a Site of Special Scientific Interest will not be permitted unless there is an overriding need for the development which clearly outweighs the nature conservation value of the site itself and its role within the national network of such sites, and there are no suitable alternative sites for the development. Proposals for development likely to have an adverse effect on a Local Nature Reserve or a Regionally Important Geological/Geomorphological Site will not be approved unless it can be clearly demonstrated that there are reasons for the development which outweigh the need to safeguard the nature conservation value of the site. In urban areas existing local wild spaces will be protected.

Policy 105 Lakes, Reservoirs and Ponds: Any development adversely affecting, either directly or indirectly, the nature conservation or landscaping interest of any lake, reservoir, pond or other body of open water will only be permitted where it can be demonstrated that the reasons for the development outweigh the need to retain the feature.

Hertfordshire Biodiversity Action Plan (1998)

The Hertfordshire Biodiversity Action Plan (BAP)⁵⁸

⁵⁸ Available at https://www.stalbans.gov.uk/Images/SP_SLP_ENV006HertfordshireBiodiversityActionPlan_tcm15-54906.pdf

- highlights areas within Dacorum of particular interest and importance for biodiversity,
- sets out core areas for heath and acid grassland restoration and re-creation; and
- sets out the distribution of key neutral grasslands and core areas.

8 Green infrastructure

National Planning Policy Framework (2019)

Specific points of relevance include the following paragraph:

Paragraph 97: Existing open space, sports and recreational buildings and land, including playing fields, should not be built on unless:

- a) an assessment has been undertaken which has clearly shown the open space, buildings or land to be surplus to requirements; or
- b) the loss resulting from the proposed development would be replaced by equivalent or better provision in terms of quantity and quality in a suitable location; or
- c) the development is for alternative sports and recreational provision, the benefits of which clearly outweigh the loss of the current or former use.

Adopted Core Strategy 2006-2031 (September 2013)

Policies with direct relevance include **Policy CS26: Green Infrastructure** - the Green Infrastructure Network will be protected, extended and enhanced.

Dacorum Borough Local Plan 1991-2011 Saved Policies (April 2004)

Relevant policies include **Policy 76: Leisure Space in New Residential Developments** - Permission will not be granted for residential developments of over 25 dwellings or 1 hectare in area unless public leisure space is provided. The space provided should meet a standard of at least 1.2 hectares (3 acres) per 1,000 population, or 5% of the development area, whichever is greater. The space should be usable, well located and purposefully designed, incorporating landscaping, play equipment and other features as necessary.

Dacorum Borough Green Infrastructure Plan (March 2011)

The Dacorum Green Infrastructure (GI) Plan⁵⁹ provides a borough-wide framework for enhancement and creation of Green Infrastructure within Dacorum and outlines a series of potential projects to deliver multiple functions and benefits including on:

- Grand Union Canal, Colne Valley and Regional Park Enhancements;
- Urban GI Heritage conservation and enhancement;
- Thames Tributaries, River Valleys and Corridors; and
- Reconnecting Rights of Way that have been severed by major barriers to movement.

Open Space Study (March 2008)

The Study⁶⁰ recommends that new open spaces should be established where opportunities arise as a result of new housing development. The settlements with the largest relative deficits of open space are Berkhamsted, Bovingdon and Markyate. Where possible opportunities should be sought to increase the amount of formal and informal open space in these settlements. This study is currently in the process of being updated.

⁵⁹ Available at [http://www.dacorum.gov.uk/docs/default-source/strategic-planning/inf-5-green-infrastructure-study-\(march-2011\).pdf](http://www.dacorum.gov.uk/docs/default-source/strategic-planning/inf-5-green-infrastructure-study-(march-2011).pdf)

⁶⁰ Available at <http://www.dacorum.gov.uk/docs/default-source/planning-development/final-version-of-open-space-studyv3.pdf>

9 Flood risk

National Planning Policy Framework (2019)

Specific points of relevance include the following paragraphs:

- **Paragraph 155:** Inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest existing or future risk.
- **Paragraph 157:** All plans should apply a sequential, risk-based approach to the location of development – taking into account the current and future impacts of climate change – so as to avoid, where possible, flood risk to people and property.
- **Paragraph 158:** The aim of the sequential test is to steer new development to areas with the lowest risk of flooding. Development should not be allocated or permitted if there are reasonably available sites appropriate for the proposed development in areas with a lower risk of flooding.

Adopted Core Strategy 2006-2031 (September 2013)

Policies with direct relevance for flood risk include **Policy CS31: Water Management** - development will be required to avoid Flood Zones 2 and 3.

Dacorum Borough Council Water Cycle Study (2010)⁶¹

This study is soon to be replaced by a new Water Study. However, this was not yet available at the time of writing. Key water cycle issues for growth by settlement include:

Berkhamsted:

- Significant waste water treatment and sewerage network capacity upgrades likely to be required at Berkhamsted Wastewater Treatment Works (WwTW)⁶²; and
- Potential increase in downstream flood risk.

Bovingdon:

- New development to the south of the town will be closer to the pumping station, therefore requiring less network upgrades.

Hemel Hempstead:

- Significant growth will severely impact the trunk sewer network to Maple Lodge WwTW;
- Sites to the south would be preferable as they minimise the distance of upgrades needed through the urban area;
- Maple Lodge WwTW will need upgrading given the growth in the catchment;
- Growth would significantly increase the risk of sewer flooding throughout the existing settlement, especially if growth occurred in the northeast and northwest; and
- The sensitive nature of the habitats downstream of the Maple Lodge WwTW may constrain growth.

Kings Langley:

- Localised network issues may need to be resolved to ensure the risk of sewer flooding does not increase;

⁶¹ Available at <https://www.threerivers.gov.uk/download?id=31369>

⁶² See Dacorum Infrastructure Delivery Plan (2017)- these now have been delivered.

- The total increase of flows throughout the catchment is likely to increase flood risk downstream of the Maple Lodge WwTW discharge, although the contribution from this settlement is relatively small; and
- Whilst Kings Langley projected growth would contribute relatively small growth levels to the catchment, there is a risk that the overall total growth in the catchment will be constrained by the sensitive habitats downstream of Maple Lodge WwTW.

Markyate:

- Markyate WwTW will require upgrading to accommodate any significant growth. Sites to the southeast are preferable as they minimise the distance to the WwTW, and hence any sewer upgrades through the existing settlement.

Tring:

- Tring WwTW will require upgrades for any significant growth;
- Sites to the east, south and west may require substantial network upgrades through the existing settlement, or a new direct sewer to the WwTW; and
- Localised network issues may need to be resolved to ensure the risk of sewer flooding does not increase.

Dacorum Strategic Flood Risk Assessment (Volume 1, August 2007, Volume 2, June 2008)

The purpose of the Volume 1 Strategic Flood Risk Assessment (SFRA) is to assess and map all forms of flood risk from groundwater, surface water, sewer and river sources, taking into account future climate change predictions, and use this as an evidence base to locate future development primarily in low flood risk areas. It makes following recommendations:

- Protect the functional floodplain from development;
- Direct vulnerable development away from flood affected areas;
- Ensure all new development benefits from dry pedestrian access without passing through the 1 in 100 year plus climate change floodplain, and that emergency access is possible;
- Promote the use of sustainable urban drainage systems in all flood zones to achieve greenfield discharge rates on both greenfield and brownfield sites;
- Support flood alleviation measures under consideration by the Environment Agency by safeguarding possible sites for flood storage and other channel works; and
- Seek developer contributions via Section 106 planning obligations (in consultation with the Environment Agency) to fund strategic flood risk management facilities and bring benefit to the wider community.

10. Retail

National Planning Policy Framework (2019)

Specific points of relevance include the following paragraphs:

- **Paragraph 85:** Planning policies should define a network and hierarchy of town centres and promote their long-term vitality and viability – by allowing them to grow and diversify in a way that ... allows a suitable mix of uses (including housing) ... and allocate a range of suitable sites in town centres to meet the scale and type of development likely to be needed, looking ten years ahead.

- **Paragraph 87:** When considering edge of centre and out of centre proposals, preference should be given to accessible sites which are well connected to the town centre.

11. Community Infrastructure

National Planning Policy Framework (2019)

Specific points of relevance include the following paragraph:

- **Paragraph 20:** Strategic policies should set out an overall strategy for the pattern, scale and quality of development, and make sufficient provision for community facilities (such as health, education and cultural infrastructure);
- **Paragraph 83:** Planning policies and decisions should enable the retention and development of accessible local services and community facilities, such as local shops, meeting places, sports venues, open space, cultural buildings, public houses and places of worship.
- **Paragraph 92:** To provide the social, recreational and cultural facilities and services the community needs, planning policies and decisions should plan positively for the provision and use of shared spaces, community facilities (such as local shops, meeting places, sports venues, open space, cultural buildings, public houses and places of worship) and other local services to enhance the sustainability of communities and residential environments;

Dacorum Borough Local Plan 1991-2011 Saved Policies (April 2004)

Policies with relevance include **Policy 12 Infrastructure provision and phasing** - In considering all applications for development, the Council will take into account the capacity of existing and potential infrastructure, including public transport, water and sewerage, other utilities and social infrastructure to absorb further development.

Hertfordshire Infrastructure and Funding Prospectus 2018-2031

Key relevant findings of the prospectus include the following:

- Across most infrastructure topics, decades of growth have created deficits in existing infrastructure, both across Hertfordshire and in localised areas.
- There is significant congestion on the rail and road network across the County. This has led to unreliable journey times due to limited resilience on the motorways resulting in daily delays. Similarly, on the rail network congestion can be seen on most lines leading into London (in terms of seating capacity).
- Both road and rail network suffer from poor east-west connections, resulting in an over-reliance on private vehicle use within Hertfordshire.
- Future education demand will expand to 2031 for new primary and secondary schools.
- Pressure on the health and social care sector will continue to grow. This is leading to a shift in the future provision of healthcare with a move towards a more integrated approach focused on co-location of healthcare facilities and development of hubs.
- Hertfordshire can generally be considered to have a high-quality landscape and provision of open space and green infrastructure. This is partially due to its legacy of garden cities and new towns in the 20th century and the location of Chiltern Hills AONB to the west of the county. However, planned housing and economic growth will need to be mitigated through provision of new strategic green infrastructure, enhancing the quality of existing provision and mitigating existing localised issues.

- There are no significant energy (electricity, gas, or gas) projects identified, however to meet future growth to 2031 there will need to be upgrades and reinforcement to the existing network across the county.
- To meet future water supply and waste water requirements, in the long term there will need to be upgrading of infrastructure to meet localised growth demands around existing settlements.

Dacorum Infrastructure Delivery Plan (July 2017)

The Dacorum Infrastructure Delivery Plan (IDP) provides a summary of the key infrastructure projects for each of the major towns and villages within the Borough. An update is being drafted but not yet available at the time of writing. The 2017 IDP's relevant key findings by settlement are as follows:

Hemel Hempstead

- Proposed health hub on Hospital site
- Proposed Intermodal Interchanges at key gateways
- Potential need for additional 10 - 17 forms of entry for Primary Education
- Proposed museum to be delivered in the Bury
- Junction improvements throughout Maylands Growth Corridor
- Potential need for additional 10 forms of entry for Secondary education.
- 2 new GP surgeries proposed
- Programme of playground improvements in progress across Hemel Hempstead

Berkhamsted

- Two education zones identified.
- An additional four forms of entry needed to meet housing demands.
- Completed and proposed junction improvements
- Four existing GP surgeries with three at capacity potential to accommodate growth within Gossoms End Surgery
- Play area upgrades
- Potential for upgrades to the Sports Centre
- Waste water treatment works recently upgraded but local connection works required.

Tring

- Proposed expansion to Tring Cemetery
- Two GP premises, no recorded capacity issues at present
- Currently four Primary Schools, one additional form of entry needed to meet demand
- Proposed upgrades to Tring Sports Centre
- Enhancements to Tring Park
- Improvements to Tring Station to address demands from growth
- Facilities at Tring Secondary School need to be extended and additional detached playing fields provided.

Markyate

- Markyate Primary School recently expanded, no anticipated capacity issues

- One existing surgery and one new build surgery to be completed
- New demand on secondary places to be met in Harpenden
- Planned play area improvements

Kings Langley

- Two existing GP premises with capacity to meet future demands
- Growth in Abbots Langley likely to trigger demand for new primary school
- Recently improved play areas

Bovingdon

- Possible need for expansion of primary school
- The 2 existing GP premises will struggle to meet demand
- Demand for secondary school places to be met by expansion of schools elsewhere
- Possible requirement for upgrade to Chesham Waste Water Treatment Works to accommodate growth.

12. Sustainability Appraisal

Sustainability Appraisal Working Note: Schedule of Site Appraisals (2017)

The Working Note assesses sites in the Green Belt or Rural Area that are on the edge of the towns and large villages and have a potential capacity of 50 dwellings or more, as well as sites that could deliver employment development, including mixed-use development. This includes some sites relevant to our study.

It assesses each site across each of the fifteen SA Objectives, namely:

- SA1 Biodiversity;
- SA2 Water;
- SA3 Flood risk;
- SA4 Climate change;
- SA5 Air quality;
- SA6 Soils;
- SA7 Resource efficiency;
- SA8 Historic environment;
- SA9 Landscape;
- SA10 Health and wellbeing;
- SA11 Sustainable locations;
- SA12 Community cohesion;
- SA13 Housing;
- SA14 Economy; and
- SA15 Employment.

Each site is 'scored' across each of the fifteen objectives. Scoring on each objective states whether the option has a positive, negative, mixed or neutral effect and whether these effects are significant or not.

In general, scoring was positive; none of the sites received more than one 'significant negative effect' score, many sites achieved seven or more positive effects, and two sites achieved significant positive effects.

Appendix C - Infrastructure standards currently used by Dacorum for planning purposes⁶³

Infrastructure type	Hertfordshire Infrastructure and Funding Prospectus 2018 Standard	Benchmark basis
Early years	0.09 per dwelling	Essex County Council Developers' Guide to Infrastructure Contributions ⁶⁴
Early years	56 places per nursery	Essex County Council Developers' Guide to Infrastructure Contributions ⁶⁵
Primary education	1 Form of Entry per 500 dwellings	Hertfordshire County Council ⁶⁶
Primary education	210 pupils per Form of Entry	Hertfordshire County Council ⁶⁷
primary education	0.42 pupils demand per dwelling	Hertfordshire County Council ⁶⁸
Secondary education	0.39 pupils demand per dwelling	Hertfordshire County Council ⁶⁹
Secondary education	195 pupils per Form of Entry	Hertfordshire County Council ⁷⁰
Primary health - GP provision	2000 patients per GP	NHS Hertfordshire Valleys CCG ⁷¹
Primary health - GP provision	0.5 GPs per 1000 patients	NHS Hertfordshire Valleys CCG ⁷²
Primary health - GP provision	199 sqm floorspace per GP	NHS Hertfordshire Valleys CCG ⁷³
Dentist provision	1760 people per dentist	Existing ratio across England, 2015 ⁷⁴
Dentist provision	50 sqm floorspace per dentist	NHS HUDU Planning Contributions Model 2017 ⁷⁵
Healthcare (acute)	1.96 beds per 1000 people	NHS England, Bed Availability and Occupancy Data-Overnight ⁷⁶
Healthcare (acute)	160 sqm floorspace per acute bed	Best practice based on AECOM data ⁷⁷

⁶³ Standards derived from AECOM's Hertfordshire Infrastructure and Funding Prospectus 2018.

⁶⁴ Available at <https://www.essex.gov.uk/Environment%20Planning/Development-in-Essex/Documents/Developers-guide.pdf>

⁶⁵ Ibid.

⁶⁶ Provided by HCC as part of stakeholder engagement work for AECOM's Hertfordshire Infrastructure and Funding Prospectus (2018).

⁶⁷ This benchmark is used not only by HCC but by most, if not all, education authorities across the wider area, including many London boroughs, Essex, Kent, Surrey and Cambridgeshire.

⁶⁸ Provided by HCC as part of stakeholder engagement work for AECOM's Hertfordshire Infrastructure and Funding Prospectus (2018).

⁶⁹ Ibid.

⁷⁰ Provided by HCC as part of stakeholder engagement work for AECOM's Hertfordshire Infrastructure and Funding Prospectus (2018). The benchmark builds in an assumption that 75% of secondary school pupils stay on for sixth form education.

⁷¹ Provided by CCG as part of stakeholder engagement work for AECOM's Hertfordshire Infrastructure and Funding Prospectus (2018).

⁷² Ibid.

⁷³ Ibid.

⁷⁴ General Dentist Council- for example, see https://www.braintree.gov.uk/downloads/file/7630/exd013b_east_colchester_sif_cost_spreadsheet

⁷⁵ Available at <https://www.healthyrbandevelopment.nhs.uk/our-services/delivering-healthy-urban-development/hudu-model/>

⁷⁶ Available at <https://www.england.nhs.uk/statistics/statistical-work-areas/bed-availability-and-occupancy/bed-data-overnight/>

⁷⁷ Data gathered by AECOM across multiple cost consultancy projects.

Infrastructure type	Hertfordshire Infrastructure and Funding Prospectus 2018 Standard	Benchmark basis
Childrens' play space	10 sqm designation per child (aged 0-16)	GLA Play Space standards ⁷⁸
Childrens' play space	(informal) 6.90 sqm per 1000 children (aged 0-16)	AECOM ⁷⁹
Swimming pool	4,973 people per lane	Sport England Sports Facility Calculator ⁸⁰
Sports hall	3547 people per court	Sport England Sports Facility Calculator ⁸¹
Indoor bowls	15,291 people per rink	Sport England Sports Facility Calculator ⁸²
Artificial pitch	34,483 people per artificial pitch	Sport England Sports Facility Calculator ⁸³
Outdoor sport and recreation	1.2 ha. playing fields per 1000 people	National Playing Fields Association standard ⁸⁴
Parks and gardens	2.8 ha per 1000 people	Dacorum Open Space Study ⁸⁵
Natural and/or semi natural open space	1.00 ha per 1000 people	Dacorum Open Space Study ⁸⁶
Allotments	0.35 ha per 1000 people	Dacorum Open Space Study ⁸⁷
Community space	65 sqm per 1000 people	AECOM ⁸⁸
Arts and cultural space	45 sqm per 1000 people	Town and Country Planning Association ⁸⁹
Library	30 sqm per 1000 people	Town and Country Planning Association ⁹⁰
Adult social care	25 nursing home bedrooms per 1000 people over 75	Housing Learning and Improvement Network: Strategic Housing for Older People (SHOP) Analysis ⁹¹
Adult social care	65 residential care bedrooms per 1000 people over 75	Housing Learning and Improvement Network: Strategic Housing for Older People (SHOP) Analysis ⁹²

⁷⁸ Mayor of London, Shaping Neighbourhoods: Play and Informal Recreation- Supplementary Planning Guidance, September 2012. Available at https://www.london.gov.uk/sites/default/files/osd30_shaping_neighbourhoods_play_and_informal_recreation_spg_high_res_7.ppt

⁷⁹ Data gathered by AECOM across multiple infrastructure projects.

⁸⁰ Available on the Sport England website at <https://www.sportengland.org/our-work/partnering-local-government/tools-directory/sports-facility-calculator-sfc/>

⁸¹ Ibid.

⁸² Ibid

⁸³ Ibid.

⁸⁴ National Playing Fields Association Standards, 2001. This benchmark is used not only by HCC but by most, if not all, county councils and local authorities across the wider area.

⁸⁵ March 2008, available at <http://www.dacorum.gov.uk/docs/default-source/planning-development/final-version-of-open-space-studyv3.pdf?Status=Master&sfvrsn=0>

⁸⁶ Ibid.

⁸⁷ Ibid.

⁸⁸ As cited in HIFP, based on AECOM knowledge and experience of best practice across multiple Growth and Infrastructure Frameworks (Kent, Essex, Surrey).

⁸⁹ Improving Culture, Arts and Sporting Opportunities Through Planning: A Good Practice Guide. Available at <https://www.tcpa.org.uk/culture-guidance>

⁹⁰ Ibid.

⁹¹ Available at <https://www.housinglin.org.uk/Topics/browse/HousingExtraCare/ExtraCareStrategy/SHOP/SHOPAT/>

⁹² Ibid

Infrastructure type	Hertfordshire Infrastructure and Funding Prospectus 2018 Standard	Benchmark basis
Adult social care	45 extra care bedrooms per 1000 people over 75	Housing Learning and Improvement Network: Strategic Housing for Older People (SHOP) Analysis ⁹³
Adult social care	80 beds per nursing care facility	Kent and Medway Growth and Infrastructure Framework ⁹⁴
Adult social care	80 beds per residential care facility	Kent and Medway Growth and Infrastructure Framework ⁹⁵
Adult social care	80 beds per extra care facility	Best practice based on AECOM data ⁹⁶

Source: Hertfordshire Infrastructure and Funding Prospectus, AECOM (2018)

⁹³ Ibid.

⁹⁴ AECOM, Kent and Medway Growth and Infrastructure Framework 2016. Available at <https://www.kent.gov.uk/about-the-council/strategies-and-policies/environment-waste-and-planning-policies/growth-and-infrastructure-framework-qif>

⁹⁵ Ibid.

⁹⁶ Data gathered by AECOM across multiple cost consultancy projects.

