

### **B1.5.3 Detailed Methodology for More Detailed Assessment for Housing Sites**

Paragraphs 4.31 to 4.33 of the SSM advises that further indicative capacity work will be undertaken on each site identified for further testing. This appendix provides further detail on the approach followed.

#### **Establishing what capacity re-assessment is required**

Before commencing the indicative site assessment a review of information submitted on each site was undertaken. The purpose of this review was to better understand the nature of the information the Council held and the extent to which a promoter/developer could be judged to have taken account of national planning policy requirements and site-specific constraints.

The capacity indicated by the promoter<sup>5</sup>, alongside any additional supporting material, was reviewed to assess whether the information, approach and assumptions used were consistent with the method set out in the table below, and with the emerging Local Plan policies. This review included:

- checking that the promoter/developer has followed a broadly consistent approach in establishing a yield for the site, and to check that site-specific constraints have been taking into account in reducing the site yield;
- assessing whether the promoter/developer used a net or gross density;
- what assumptions were made by the promoter/developer for parking provision and the amount of non-housing uses to be accommodated on site;
- whether the promoter/developer's proposals are compliant with emerging NPPF policy regarding commuter hubs; and
- what tenure and unit type / size mix is being promoted, and why.

For many sites, the Council held multiple data, which had been collected over a period of time, and where there were inconsistencies. Information received through the Stage 4 developer survey, or planning applications and pre-application requests, were considered to supersede earlier Call for Sites submission information.

Following this review, the final indicative net capacity for each site was calculated based on the methodology set out in the table below. For sites where a pre-application scheme has been submitted to the Council, and where the quantum of development is considered appropriate in principle, the quantum of development set out in the pre-application response was used instead.

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<sup>5</sup> through the Call for Sites, Stage 4 promoter/developer survey, or in other evidence documents such as the Council's Settlement Capacity Study (2016) or the SLAA (2016)

	Stage	Information used to check proposals against	Assessment undertaken	Output	Justification for approach
1	Reviewing Site Polygon	Site polygon (area) was identified in the Council's SLAA.	Review site polygons against the proposed site boundary indicated in the response to the land promoter/developer survey. Amend polygon as necessary.	Revised site boundary.	To ensure that site capacity is accurately calculated on the most up-to-date site area that is proposed for development.
2	Accounting for Policy Constraints which effect the developable site area	<p><b>2.a Major policy constraints:</b></p> <p>In accordance with the Site Selection Methodology, the following international and national environmental and policy constraints are considered to pose absolute constraints on residential development, due to the policy or legal protection afforded to such designations. On this basis, the constrained site area was calculated, and subtracted from the site total.</p> <ul style="list-style-type: none"> <li>• Internationally designated sites (Special Protection Areas, Special Areas of Conservation, Ramsar)</li> <li>• Flood zone 3B</li> <li>• Local Nature Reserves and County Wildlife Sites</li> <li>• Epping Forest Buffer Land</li> <li>• HSE Inner Zone</li> </ul>	Quantitatively calculate reduction in the developable area of the land subject to the identified constraints, using GIS tools.	Revised site area (ha).	These designations are identified as Major Policy Constraints in Stage 1 of the SSM and are considered a constraint to development, such that development of the site would likely cause significant social, environmental harm.
		<p><b>2.b Non-major policy constraints (Stage 2):</b></p> <p>Given the environmental sensitivity of the following designations, it was considered that development of land subject to these constraints would not be desirable. On this basis the constrained site area was calculated, and subtracted from the site total.</p> <ul style="list-style-type: none"> <li>• Nationally designated sites (Site of Special Scientific Interest)</li> <li>• Ancient Woodland</li> <li>• BAP Protected Species and Habitats</li> <li>• Local Wildlife Sites</li> <li>• Historic Parks and Gardens</li> <li>• Scheduled Ancient Monuments</li> <li>• Cemeteries</li> <li>• Allotments (statutorily protected allotments only)</li> <li>• Car park sites where retention of car parking on site is required. This includes Transport for London car park sites, and is informed by the Council's Settlement Capacity Study (2016).</li> <li>• where the entire site is located in an area identified as open space</li> <li>• where development on the site would involve the loss of a playing field.</li> </ul>	Quantitatively calculate reduction in the developable area of the land subject to the identified constraints, using GIS tools.	Revised site area (ha).	These designations are identified as non-major policy constraints through Stage 2 of the SSM. Development of this land would be undesirable.
3	Establishing a baseline density for the site	<p><b>Baseline density:</b></p> <p>30 dwellings per hectare (dph)</p>	No action.	30 dph	A site capacity baseline was established in the SLAA. Although the SLAA included a range of densities, the majority of sites were assigned 30 dph and therefore this is considered to be an appropriate starting point for calculating site density, which aligned with the emerging housing policies in the Draft Local Plan.
		<p><b>3a Settlement Hierarchy:</b></p> <ul style="list-style-type: none"> <li>• Town</li> <li>• Large Village</li> <li>• Small Village</li> </ul>	If a site is located in: A rural location or Hamlet: 30 dph x 100%	Density multiplier adjusted for Settlement Hierarchy (dph)	This reflects the Council's Settlement Hierarchy (set out in the Council's Settlement Hierarchy Technical Paper (2015)). Higher-order settlements are assumed to be capable of accommodating higher densities of development than lower-order settlements.

	Stage	Information used to check proposals against	Assessment undertaken	Output	Justification for approach
		<ul style="list-style-type: none"> <li>Hamlet</li> </ul> <p><b>3b Setting - location:</b></p> <ul style="list-style-type: none"> <li>Town Centre</li> <li>Town Local Centre</li> <li>Large Village Centre</li> <li>Large Village Local Centre</li> <li>Other</li> </ul> <p><b>3c Commuter hubs:</b> Distance to nearest tube / rail station – where sites scores (+) at Stage 2 for criteria 3.1, indicating that the site is located less than 1 km from the nearest tube or rail station.</p>	<p>Small Village: 30 dph x 115% Large Village: 30 dph x 130% Town: 30 dph x 150%</p> <p>If a site is located in: Town Centre: 150% Town Local Centre: 130% Large village centre: 130% Large Village Local Centre: 115% Other: 100%</p> <p>If a site scores(+) at Stage 2 for criteria 3.1 = density multiplier x 150%</p>	<p>Density multiplier adjusted for Setting (dph)</p> <p>Density multiplier adjusted for Accessibility (dph)</p>	<p>This reflects the emerging policy in the Draft Local Plan which seeks to have higher densities in Town and Large Village centres that benefit from greater access to local services, and more sustainable transport options, and a lower level of increase for Local Centres, given the more limited access to local services in these locations.</p> <p>To check whether the site falls within the definition of being near a commuter hub, to satisfy emerging NPPF policy on higher densities at transport / commuter hubs sites scoring (+) for criteria 3.1 at Stage 2 were considered proximate to a commuter hub.</p>
4	Baseline Density	This step confirmed the baseline density for the site based on the outcomes of the previous step.			
5	Adjusting Baseline Density	<p><b>5.a Non-major policy constraints affecting density:</b> These constraints are considered to potentially affect the form of a development. This assessment therefore considered the extent to which such constraints may affect the site density or could be accommodated through site configuration. Where it is considered that the impacts of these constraints can only be mitigated through a reduction in the quantum, or density of development, or in order to provide a buffer to identified constraints, a reduction in the site density was made.</p> <p>Where constraints assessed at 5a duplicate those considered at 2a and 2b, this reflects that for these constraints, where the developable area of the site may have been reduced, the density / amount of development likely to be supported on the remaining parts of the site may need to be assessed further to establish whether any impact on the designation arising from its proximity to the developable area would require a further reduction, for instance to provide a buffer of lower density development adjacent to the designation.</p> <p>The constraints considered were:</p> <ul style="list-style-type: none"> <li>Internationally designated sites (SPA, SAC, Ramsar) for those sites scoring (-) or (--) at Stage 2 for criteria 1.1, excluding those sites where impact on designated sites would be through in-combination effects only.</li> <li>Nationally designated sites (SSSI) - for those sites scoring (-) or (--) at Stage 2 for criteria 1.2.</li> <li>Ancient Woodland and Ancient/Veteran Trees outside of Ancient Woodland - for those sites scoring (-) or (--) at Stage 2 for criteria 1.3a, 1.3b and 6.3 followed by a further qualitative judgement based on the location and density of Ancient/Veteran Trees and/or TPOs adjacent to or within the site.</li> <li>BAP Protected Species and Habitats - for those sites scoring (-) or (--) at Stage 2 for criteria 1.5.</li> <li>Local Wildlife Site/Local Nature Reserves - for those sites scoring (-) or (--) at Stage 2 for criteria 1.6.</li> </ul>	<p>Qualitatively assess any reduction in densities of the developable area that may be required to account for site constraints. Use GIS tools, constraints mapping and the Stage 2 pro formas to assess the site and any percentage reduction to the density required to account for likely mitigation. For each site the constraints affecting the site were identified along with any justification for applying or not applying a density reduction.</p>	<p>Density multiplier adjusted to account for site constraints and associated mitigation.</p>	<p>To check that development potential of the site is accurately balanced with any constraints that apply. This considered the density of development that is likely to be suitable, and whether any identified constraints would likely require a reduction in density in order to mitigate any impacts.</p>

	Stage	Information used to check proposals against	Assessment undertaken	Output	Justification for approach
		<ul style="list-style-type: none"> <li>HSE middle zone and constraining oil pipelines - for those sites scoring (-) or (--) at Stage 2 for criteria 6.2a, and where the amount of development would not likely be supported when assessed against HSE LUP guidance.</li> <li>Flood Zone 2 and 3a - consider extent of land subject to these constraints, and whether open space/other uses can be located in more vulnerable locations. This will be informed by the site size and any supporting information or masterplan provided by the promoter.</li> <li>Electricity cables and pylons – for those sites scoring (-) or (--) at Stage 2 for criteria 6.2b, qualitative assessment of the site against National Grid guidance document to assess any impact on site density.</li> <li>Listed Buildings, Scheduled Ancient Monuments, Historic Parks and Gardens – qualitative assessment of any likely reduction in density that may be required to mitigate impacts on a heritage asset or its setting, and for SAM and Historic Parks and Gardens, any further reduction required to mitigate impact to the setting of the designation in addition to that identified at Step 2. Any likely reduction will depend on the location of the asset, and for Listed Buildings, its Grade (Grade I having a wider and more sensitive setting compared with Grade II). It was assumed that development would not involve the loss of any Listed Building. Qualitative assessment informed by the scoring at Stage 2 for criteria 1.8a.</li> <li>Conservation Area – qualitative assessment of the any reduction required to mitigate impacts on Conservation Area, considering the existing character and density of the area. Qualitative assessment informed by (-) or (--) scores at Stage 2 for criteria 1.8a.</li> <li>Air Quality - for those sites scoring (--) at Stage 2 for criteria 1.9, identify if any air quality buffer to development required could be accommodated within open space on site, or whether a reduction in site capacity may be required to provide such a buffer.</li> <li>Access - for sites scoring (--) in Stage 2 assessment for criteria 6.4, assess whether access constraints would likely limit the development capacity of the site.</li> <li>Contamination – for sites scoring (--) in Stage 2 assessment for criteria 6.5, where the constraint covers only part of the site. The part of the site that is constrained was assessed for any reduction to capacity.</li> </ul>			
		<p><b>5.b Local Setting:</b></p> <p>The local setting of sites may have higher / lower existing densities than the baseline density would suggest. A qualitative adjustment was made using percentage increase / decrease to account for existing surrounding densities or to account for a particularly sensitive local context not accounted for in Step 5a.</p> <p>For some sites a substantial local setting reduction was required to an extent that development would only be suitable on a smaller part or parts of the site, were the site to be proposed for allocation. In these cases a percentage reduction was calculated for local setting, based on the amended site area, as a proportion of the total developable area.</p>	<p>Qualitatively assess any reduction in densities of the developable area that may be required to account for local setting and character, using GIS tools and mapping.</p> <p>Make adjustment to density multiplier to account for sites where only part is proposed for allocation.</p>	<p>Dwelling multiplier adjusted local setting or where only part of the site is proposed for allocation.</p>	<p>To check that development potential of the site is accurately balanced with the predominant local setting and character of the surrounding area in accordance with the emerging Draft Local Plan policies.</p>

	Stage	Information used to check proposals against	Assessment undertaken	Output	Justification for approach
		Where a reduction in capacity was made under 5b resulting in only part of a site being anticipated for allocation, any constraints adjustment made at 5a was reviewed to ensure that the identified constraints were still applicable to this amended site area, and where they were no longer applicable, the reduction to the density multiplier was reviewed.			
		<b>5.c Mixed use development:</b> Some promoters have proposed other non-residential uses within a site. Other sites comprise a location where mixed use development should be promoted on the ground floor e.g. along a High Street. This stage therefore made a reduction to account for non-residential uses proposed on-site.	For all sites, it is assumed that, unless otherwise stated or where the site conditions clearly indicate otherwise, the residential capacity of the site is not constrained by any need to provide a mix of non-residential uses, or that any non-residential uses ancillary to the development are accommodated within the gross to net density conversion.  This was assumed for all sites unless otherwise stated in land promoter/developer survey responses, or if the site is identified in North Weald Bassett Masterplan, a Development Brief, the Council's Settlement Capacity Study (2016) or is a High Street site, in which case professional judgement was used to indicate potential mix.	Dwelling number adjusted to account for the reduction in capacity for residential uses due to the provision of non-residential uses on site.	To check that the site capacity accurately reflected where the site promoter (or other evidence base documents) assumes a proportion of the site to be used for non-residential uses that would likely limit the capacity of the site to accommodate homes.  Where an amount of employment floorspace was indicated in sq.m. Gross External Area, the relevant reduction in site capacity for housing was estimated using an assumed employment space plot ratio of 0.4 <sup>6</sup> .
6	Gross to net density conversion	Gross to Net ratio residential density conversion. The ratio varies depending on site size, larger sites assumed to require more land take for non-housing uses than smaller sites.	If a site is: <1 ha in size = multiplier x 100% 1 to <5ha in size = multiplier x 90% 5 to <10ha in size = multiplier x 80% 10ha and above = multiplier x 65%	Density multiplier adjusted for gross to net ratio, to account for ancillary uses, infrastructure, open space etc.	Larger sites are assumed to require more land to be used for ancillary uses, streets and other infrastructure, open space etc. and this will reduce the developable capacity of the site. The level of adjustment proposed is based on best practice <sup>7</sup> .
7	Calculate site capacity	Calculate indicative dwelling number based on steps 2 to 6.			
		<b>7a Net Additional dwelling number</b> Net additional dwelling number, calculated by deducting the existing number of units onsite from the indicative capacity.	Identify the existing number of residential dwellings located on site. This is identified in information in the SLAA, provided by the promoter or where this is unavailable, through other means such as using aerial imagery or searching for the number of address points on the site using GIS tools.  Deduct the existing number of residential dwellings on site from the indicative capacity number.	Net additional residential dwelling number	To establish a more accurate picture of the net number of homes, which could be delivered on-site.
		<b>7b Tenure type mix:</b> Sites over 11 units to provide 40% homes affordable. Of these, 70% affordable rent and 30% intermediate.	Calculate proportion of homes which are affordable, affordable intermediate and market based on submitted information, or where this is not available, assume a mix that is compliant with emerging Local Plan policy.  If net additional dwelling capacity is above 11: <ul style="list-style-type: none"> <li>• 60% Market</li> <li>• 28% Affordable Rent</li> <li>• 12% Affordable Intermediate</li> </ul>	Indicative site capacity broken down by tenure type mix.	To demonstrate that, at the District level, the mix of sites proceeding for further testing are able to deliver the amount of affordable, intermediate and market housing identified in the Strategic Housing Market Area Assessment (2014).

<sup>6</sup> Without further information on the form or type of employment use to be assumed on a site by site basis, a plot ratio of 0.4 is used for calculating all employment space. This is a standard plot ratio for employment uses, and is generally suitable for industrial areas, warehousing and business parks, and is a lower-end figure for office space, with plot ratios typically ranging from 0.4 to 2.0. (Source: Crouch, C., 2016, *Urban Planning: An Introduction*, London: Palgrave, p. 158).

<sup>7</sup> A net developable area is a more refined estimate than a gross developable and includes only those areas which will be developed for residential and directly associated uses. This will include: access roads within the site; private garden space; car parking areas; incidental open space and landscaping; and children's play areas where these are to be provided. It therefore excludes: major distributor roads; primary schools; adult/youth play spaces or other open spaces serving a wider area; and significant landscape buffer strips.

	Stage	Information used to check proposals against	Assessment undertaken	Output	Justification for approach
		<p><b>7c Unit size mix:</b> Calculate an indicative mix of flats and houses, and the mix of one, two and three + bedroom units onsite.</p>	<p>Calculate the proportion of homes that are flats or houses, and the proportion that are one, two and three + bedroom homes. For sites where information on the unit type mix was available, the mix of unit types and sizes was used. For all other sites, a mix was estimated using the following method which is based on identified needs across the District<sup>8</sup>, and adjusted to account for the likely mix of building typologies delivered at the different gross residential densities identified for each site at steps 4 to 6.</p> <p>The proportion of unit sizes and types used to estimate unit mix for sites is derived from the SHMA housing need identified for Epping Forest District as a whole. The District-level mix was adapted and applied to 45-60 dph range as this reflects the median density range across all sites identified for further testing (around 40dph), and the minimum density range at which flats can be provided.</p> <p>The mix applied to median densities was then adjusted for both higher and lower density ranges, assuming a lower proportion of houses/higher proportion of flats at sites of higher densities. The proportions applied can be found at the table below.</p> <p>The assumed mix for each site calculated using the above approach was adjusted as required, using planning judgement, where the site configuration or its particular context would indicate a particular typology or unit size mix.</p>	<p>Indicative site capacity broken down by flat / house and unit size mix.</p>	<p>To demonstrate that, at a District level, the mix of sites proceeding for further testing are able to the residential densities that support a mix of housing types and sizes that meet identified needs.</p>

<sup>8</sup> SHMA 2014,

<b>Gross Site Density (dph)</b>	<b>Flat all</b>	<b>Flat 1 bedroom</b>	<b>Flat 2+ bedrooms</b>	<b>House All</b>	<b>House 1 bedroom</b>	<b>House 2 bedrooms</b>	<b>House 3 bedrooms</b>	<b>House 4+ bedrooms</b>
0-45	0%	0%	0%	100%	0%	20%	55%	25%
45-60	15%	8%	8%	85%	0%	17%	47%	21%
60-75	20%	10%	10%	80%	0%	14%	37%	17%
75-100	30%	15%	15%	70%	0%	12%	33%	15%
100-115	40%	20%	20%	60%	0%	10%	28%	13%
115-130	50%	25%	25%	50%	0%	9%	23%	11%
130+	60%	30%	30%	40%	0%	7%	19%	9%

Proportion of one, two, three+ bedroom dwellings, and proportions of these that are flats and houses, assumed at varying gross residential densities (dph) across proposed allocation sites.

## B1.6 Stage 4 Assessment

### B1.6.1 Land promoter/developer survey

This survey is being undertaken on behalf of Epping Forest District Council, and seeks to update and supplement existing information held on potential development sites across Epping Forest District.

Epping Forest District Council is preparing a new Local Plan, which will set out the policies that will guide development in the District up to 2033. A key part of the plan is the identification of a portfolio of sites and/or broad locations, which are most appropriate for development.

To identify sites which may be potentially suitable to accommodate housing and employment, the Council opened a public 'Call for Sites' between 2008 and 2016. Sites have also been identified through a range of other technical studies, withdrawn or refused planning applications and schemes at the pre-application stage.

The Council is now undertaking more detailed assessment of the potentially suitable sites to identify the most appropriate sites within the District. As part of this assessment, the Council wishes to better understand promoter intentions for their sites and any constraints which may exist to delivery of these sites. Please note that if you have promoted more than one site through the Local Plan process you will receive a survey for each site. We would appreciate a response to each survey.

Any data provided in response to this survey will be used to inform the development of the forthcoming local plan. Subject to the provisions made under the Freedom of Information Act 2000 and the Data Protection Act 1998, the Council will be entitled to publish and/or release the contents of any documents and/or information submitted as it sees fit.

Please answer accurately, to the best of your knowledge and in as much detail as possible. To assist in completing the survey you may wish to seek independent professional planning advice.

You may wish to provide additional documents to support your response. There is an option to upload documents at the end of the survey. Alternatively, supporting documents can be emailed to [epping.forest.sites@arup.com](mailto:epping.forest.sites@arup.com), quoting the site reference number in the email subject. Supporting documents should include the Site Reference Number in the filename.

**Please complete the survey and provide any accompanying information as soon as possible, and ideally before Thursday 30 June 2016.**

For any technical queries regarding this survey or if you think this survey has been sent to you in error, please contact **Arup** who are undertaking the survey on behalf of Epping Forest District Council.



Max Laverack, Arup  
+44 20 7755 3679  
[max.laverack@arup.com](mailto:max.laverack@arup.com)

For any enquiries relating to the Epping Forest Local Plan, please contact **Epping Forest District Council**.

Planning Policy Team  
+44 1992 564517  
[ldfconsult@eppingforestdc.gov.uk](mailto:ldfconsult@eppingforestdc.gov.uk)

## 1: Site Information and contact details

**1a. Site Reference No:** [Relevant SLAA information provided, where available]

**1b. Respondent Ref:** [Relevant SLAA information provided, where available]

**1c. Site Name and Address:** [Relevant SLAA information provided, where available]

**1d. Please provide your contact details**

*We previously recorded the following information in relation to your site – please could you review this information and update it where necessary. Where an entry is blank, this indicates we do not hold the information.*

**Name:** [Relevant SLAA information provided, where available]

**Organisation (if applicable):** [SLAA information provided, where available]

**Position (if applicable):**

**Address:** [Relevant SLAA information provided, where available]

**Postcode:** [Relevant SLAA information provided, where available]

**Telephone:** [Relevant SLAA information provided, where available]

**Email:** [Relevant SLAA information provided, where available]

**1e. Are you an agent acting on behalf of the site owner?**

[Choose one of the following answers]

YES / NO

[Relevant SLAA information, where available]

**[If NO, proceed to 2a]**

**1f. Please provide details for the site owner**

**Name / Organisation:** [Relevant SLAA information, where available]

**Address:**

**Postcode:**

**Telephone:**

## 2: Site to be considered in the development of the Local Plan

### 2a. Please confirm that you wish the identified site to be considered for inclusion in the Local Plan.

[Choose one of the following answers]

YES/NO.

[If YES, proceed to 3a]

### 2b. Please provide details of why you wish the site to be withdrawn.

## 3: Ownership and Availability

### 3a. I (or my client) is:

[Choose one of the following answers]

Sole freehold owner / Part freehold owner

[If Sole freehold owner, proceed to 3d]

### 3b. Do you know who owns the remainder of the site? Please provide as much detail as possible.

[Free entry field]

### 3c. Are you collaborating with adjacent landowners? Please confirm by what methods.

[Choose one of the following answers]

Yes - Formal collaboration agreement / Yes - Memorandum of understanding /  
Yes – Informal Agreement / No – Adjacent landowner pursuing development  
independently / No – Adjacent landowner opposes development / No – Position  
unknown

### 3d. Please provide details of the existing uses on the site (tick all applicable):

[Check any that apply]

	Tick
A1 / A2 / A3 / A5 Retail, Restaurants and Cafes, Hot Food Takeaways	
A4 Drinking Establishments	
B1 Business	
B2 General Industrial	
B8 Storage and Distribution	
Agricultural Buildings	
Other (Please State)	

**3e. Please provide details of proposed land uses for the site (tick all applicable):**

[Check any that apply]

	Tick
Residential	
Employment	
Other (Please State)	

**3f. If the site is considered to be suitable for development, would all or part of the existing use remain in occupation?**

[Choose one of the following answers]

Yes (all) / Yes (part) / No / Not applicable (site undeveloped)

[If “Yes (part)”, “No” or “Not applicable (site undeveloped)”, proceed to 3j]

**3g. What would be the timescale for the existing use to cease?**

[Choose one of the following answers]

Up to 6 months / 6 months to 1 year / 1 year to 2 years / 2 years to 5 years / More than 5 years / More than 10 years / Unknown

**3h. Would there be any compensation or cost implications for removing this use within the timescale stated?**

[Choose one of the following answers]

Yes / No

[If NO, proceed to 3j]

**3i. Please provide further details:**

**3j. Are any of the following land use restrictions relevant to the site?**

*We previously recorded the following answers for i. and ii. – do these responses remain accurate? Please note: previous responses did not include information on public rights of way or reliance on development of other land.*

[Relevant SLAA information provided, where available]

	Yes	No	Unsure	Use previous response
i. Legal constraints (e.g. restrictive covenants, easements, wayleaves, legal agreements)				
ii. 'Ransom strips' (including requirement for off-site land assembly)				
iii. Public rights of way				
iv. Reliant on development of other land				
v. Other (please confirm)				

**3k. What other land use restrictions are relevant to the site?**

[Free entry field]

**3l. Please provide further details where you have answered Yes to any restrictions in the question above.**

[Free entry field]

**3m. Please provide an indication of when the site would be available for development, if it were to be identified in the forthcoming Local Plan: *We previously recorded the following answer – does this response remain accurate?***

[Relevant SLAA information provided, where available]

[Choose one of the following answers]

Immediately / Within 5 Years / 5-10 Years / 10-15 Years / Beyond 15 Years

**3n. Is there any developer interest in the site? Please give details. *We previously recorded the following answer – does this response remain accurate?***

[Relevant SLAA information provided, where available]

[Check any that apply]

	Tick	Comments
Owned by a developer		
Under option to a developer		
Site is being marketed for sale through a land agent		
Enquiries received from developer		
None		

**3o. What is the proposed or anticipated development phasing? Please provide as much detail as possible.**

[Please enter numbers only]

	2016/ 17	2017/ 18	2018/ 19	2019/ 20	2020/ 21	2021/ 22	2022/ 23	2023/ 24	2024/ 25	2025/ 26	Between 2026/27 and 2030/31	Between 2031/32 and 2035/36
No. Residential Units												
Employment floorspace (sq m)												

**3p. If available, please provide further detail to support your phasing in 4n, including 1:1000 illustrative phasing plans (if applicable), details on anticipated sales/disposal rates and assumptions on the number of active development outlets.**

[Free entry field]

**4: Achievability**

**4a. Are any of the following constraining factors relevant to the site? If so, please comment on how you believe they could be overcome/mitigated. If possible, please upload a plan illustrating key constraints.**

*We previously recorded the following answers for - do these responses remain accurate?*

[Relevant SLAA information provided, where available]

	Tick	Comments	Use previous response
i. Flood risk / drainage			
ii. Contamination			
iii. Topography			
iv. Mains Water Supply			
v. Mains Sewerage			
vi. Electricity Supply			
vii. Gas Supply			
viii. Highways provision and/or capacity			
ix. Telecoms			

**4b. Have any initial estimates of viability been undertaken?**

[Choose one of the following answers]  
YES / NO

[If NO, survey skips to question 5a]

**4c. If YES, please provide details.**

[Free entry field]

**4d. If applicable, please provide detail of any assumptions made for viability modelling. This might include assumptions in relation to residential and non-residential values, costs (construction, externals, abnormals, contingency etc.), developer's return, affordable housing provision, Community Infrastructure Levy/residual Section 106, inflation etc. Please indicate data sources e.g. Land Registry, BCIS, Building cost models, SPON's, independent cost plans, local valuers etc.**

[Free entry field]

**4e. If available, please provide details of the anticipated approach to the delivery and financial model.**

[Free entry field]

**5: Land Use, Masterplanning and Infrastructure****5a. Has any conceptual masterplanning been undertaken for the site?**

[Choose one of the following answers]  
YES / NO

[If NO, survey skips to question 5e]

**5b. Please provide detail any work undertaken. This might include:**

- **Broad layout plans and distribution of uses**
- **Approximate densities and scale/massing**
- **Key vehicular access points and primary route layout**
- **Green infrastructure provision and approach to open space, SUDS etc.**

[Free entry field]

**5c. Please provide details of the estimated land use schedule for the site e.g. open space, local/district centre(s), residential, schools etc.**

	Land Use	Land take-up (Ha)
Use 1		
Use 2		
Use 3		
...		
Use 8		

**5d. Please provide details of the estimated floorspace by use.**

	Land Use	NIA (sqm.)/units
Use 1		
Use 2		
Use 3		
...		
Use 8		

**5e.** The proposed changes to the National Planning Policy Framework published in December 2015 offer support for higher density residential developments at transport and commuter hubs. Additionally, as part of the development of its Local Plan, Epping Forest District Council is considering revisions to its parking standards for residential development, which may reduce the level of car parking provision in more accessible locations in the District. If relevant, would this change affect your responses to questions 6b-6d?

[Choose one of the following answers]  
YES / NO

[If NO, survey skips to question 5g]

**5f. Please provide further details.**

[Free entry]

**5g.** If the proposed development schedule includes commercial and/or industrial uses, has provision been made for units for SMEs?

[Choose one of the following answers]  
YES / NO

[If YES, survey skips to question 5i]

**5h. Is this something you would be willing to consider?**

[Free entry]

**5i. If the proposed development schedule includes residential uses, has work been undertaken on the proposed mixture of dwelling by size and/or tenure?**

[Choose one of the following answers]  
YES / NO

[If NO, survey skips to question 5k]

**5j. Please provide further detail.**

[Free entry]

**5k. Has work been undertaken to date on on-site and off-site infrastructure provision?**

[Choose one of the following answers]

YES / NO

[If NO, survey skips to question 6a]

**5l. Please provide further detail, including itemised on-site infrastructure costs (where known). Submissions should note how proposed provision responds to particular identified issues around population changes, child yields and on-site utilities constraints. Key infrastructure might include:**

- Physical (Utilities and transport)
- Social (Education, health, community)
- Green (communal open space, publicly accessible open space, play space and SUDS)

[Free entry]

## 6: Site Management

**6a. Please provide details of any proposed long-term management and/or maintenance arrangements for the site.**

[Free entry]

## 7: Close

**7a. Please upload any documents which support your responses. Documents should include the Site Reference Number in the filename.**

Alternatively, please email supporting documents to [epping.forest.sites@arup.com](mailto:epping.forest.sites@arup.com), quoting the Site Reference Number in the email subject.



**7b. As part of the on-going Local Plan process there will be further opportunities to engage with us. Please confirm if you would be interested in any of the following with regard to your site(s).**

[Check any that apply]

Follow-up telephone discussion / Face to face discussion / Workshop with other promoters/landowners / I am not interested in any further engagement

\*\*\*

Thank you for taking the time to complete our survey. If you have expressed interest in any follow-up engagement, we will be back in touch shortly.

## B1.6.2 Detailed Methodology for Deliverability Assessment

In accordance with paragraph 4.38 of the SSM all sites that proceeded from Stage 3 were subjected to a detailed qualitative and quantitative RAG assessment. The section sets out each criteria and confirms the approach to scoring.

Some 20 criteria were identified for the assessment, grouped under three categories, all of which were assessed against a three point scale, as summarised below.

Ref	Criterion
1	Availability
1.1	Site ownership
1.2	Existing uses
1.3	On-site restrictions
1.4	Availability
2	Achievability
2.1	Marketability
2.2	Site viability
2.3	On-site physical and infrastructure constraints
2.3a	Primary Schools (Planning Area)
2.4b	Primary Schools (Individual)
2.5a	Secondary Schools (Planning Area)
2.5b	Secondary Schools (Individual)
2.6	Access to open space
2.7	Health
2.8	Impact on Minerals Deposits
3	Cumulative achievability
3.1	Impact on open space
3.2	Impact on primary schools
3.3	Impact on secondary schools
3.4	Impact on Green Infrastructure (GI)
3.5	Impact on Sewage Treatment
3.6	Impact on Central Line Capacity

Unless otherwise stated, the criteria assessments have relied on the following data sources (in order of preference):

- Responses from the Land Promoter/Developer Survey, including additional information supplied through the Land Promoter/Developer Survey;
- Data from the Council's SLAA database, including any additional information supplied through the Council's Call for Sites.

Many of the criteria have, in the first instance, drawn on information supplied by landowners and promoters through an online survey undertaken in June/July 2016..

The survey posed a series of questions focused around the themes of availability and achievability, and also contained existing information held on the Council's SLAA database, requesting updates to this information where necessary. Additionally, respondents were also provided with the opportunity to submit additional information to support their responses, including drawings, plans and any other relevant technical work undertaken to date.

Invitations to complete the survey were issued electronically in a series of tranches to promoters, developers and/or landowners for all sites that proceeded to Stage 2, where contact information was available. Further details on how the survey was undertaken as well as its content is provided in Section 2.8.1 of the Report on Site Selection.

For sites with no completed survey proforma, the assessment drew on information from the Council's SLAA, as well as additional information submitted to the Council through the Call for Sites process. In some cases, additional desk-based research was undertaken to identify site characteristics to further inform the assessments. Where this information has been relied upon, this is stated in the assessment.

Some of the criteria, particularly those undertaken as part of the achievability assessments, have involved quantitative assessment using GIS tools, drawing on a broader range of data. Details of the data sources used are provided for the relevant criteria.

## 1 Availability

### 1.1 Site ownership

(+)	0	(-)
Site is in single ownership.	Site is in multiple ownership where landowners are promoting independent schemes that are not in conflict, or working collaboratively on a scheme, and there is an agreement in place between the parties.	Site ownership is unknown or is in multiple ownership and the other owners are either unknown, oppose the development or are promoting another conflicting scheme.

This assessment was undertaken with reference to proformas from the survey sent to site promoters and landowners. As part of the survey, respondents were asked if they owned all or only part of the site. If the latter, respondents were then asked:

- Do you know who owns the remainder of the site? Please provide as much detail as possible;
- Are you collaborating with adjacent landowners? Please confirm by what methods.

For sites where a response to this question was received, a score was assigned as appropriate according to the criteria set out previously.

For sites where no proforma was available, or the response to the above questions was either blank or unclear, reference was made in the first instance to equivalent records from the SLAA database, and otherwise to any additional information submitted as part of the Call for Sites process.

Where no information was available from either of the aforementioned sources, it was assumed for the purposes of this assessment that site ownership details were unknown and a score of (-) was assigned accordingly.

## 1.2 Existing uses

(+)	0	(-)
There are no existing uses on-site or existing uses could cease in less than two years.	Existing uses on-site which could cease between two and 10 years.	Existing uses on-site where the use could cease in more than 10 years or the timescale for on-site uses ceasing is unknown.

This assessment was undertaken with reference to proformas from the Land Promoter/Developer Survey. As part of the survey, respondents were asked to provide details of any existing on-site land uses. In relation to this, they were then asked:

- If the site is considered to be suitable for development, would all or part of the existing uses remain in occupation?
- What would be the timescale for the existing use to cease?

For sites where responses to both of these questions were received, a score was assigned in line with the aforementioned criteria based on the information provided.

For sites where a promoter response had either not been received, or the response to both of the above questions was either blank or unclear, reference was in the first instance made to information from the SLAA database, which recorded whether relocation was required for existing uses. Where this was the case, a judgement was made on when existing uses would cease based on the identified timescale for availability.

Where no information was available from either the survey or SLAA database, where possible, desk-based research was undertaken to establish current on-site land uses. This drew on the Stage 2 and Stage 3 assessments and desk-top information sources such as aerial photography. Based on the identified land use, an element of professional judgement was applied to determine whether the site would or would not be available during the plan period, or whether the timescale for uses to cease was unknown. Where this judgement was made, this is stated in the assessment.

### 1.3 On-site restrictions

(+)	0	(-)
Site is not subject to any known restrictions.	Site is subject to restrictions but agreement in place or being negotiated to overcome them, or not judged to be a constraint.	Site subject to restrictions and there is limited prospect of the restriction being overcome.

This assessment was undertaken with reference to proformas from the Land Promoter/Developer Survey. The assessment considered any information supplied on the following restrictions:

- Legal constraints (e.g. restrictive covenants, easements, wayleaves, legal agreements);
- ‘Ransom strips’ (including requirement for off-site land assembly);
- Public rights of way;
- Reliant on development of other land; and
- Others.

Respondents were asked to confirm whether any of these restrictions should be judged as a constraint and, if so, how they would be overcome. This information was used to allocate a score in line with the aforementioned criteria. The appropriateness of proposed mitigation was sense checked in order to inform this judgement.

In cases where no information was provided on how restrictions would be overcome, an element of professional judgement was made on the likely impact of identified restrictions on the availability of the site. For example, public rights of way were, as a rule of thumb, not judged to be a major constraint to development and scored 0, whereas it was generally deemed that restrictions such as ransom strips or legal constraints would be more difficult to overcome and were therefore scored (-).

For sites where the survey response had either not been received, or the response to the above questions was either blank or unclear, reference was made to information from the SLAA database which provided information on the presence of ransom strips and site covenants.

Where no information was available from either the survey or the SLAA database sites were automatically assigned a score of (+), as no constraint was identified. Where this judgement was made, this is stated in the assessment.

### 1.4 Availability

(+)	0	(-)
Site expected to be available between 2016 and 2020.	Site expected to be available between 2021 and 2025.	Site not expected to be available until at least 2026 or site availability is unknown.

This assessment was undertaken with reference to proformas from the Land Promoter/Developer Survey. Respondents were asked to provide an indication of when the site would be available for development if it were to be identified in the forthcoming Local Plan.

For sites where this question was answered, a score was assigned as appropriate. For sites where a promoter response had either not been received, or where the response to the above question was either blank or unclear, reference was made to equivalent information from the Council's SLAA database, which categorised sites based on their timescale for availability in years.

Where data was available neither from the survey nor the SLAA database, it was assumed for all sites where pre-application enquiries had been received by the Council or where planning applications had been submitted that the site was available immediately. Where no information was held, it was assumed that the site availability was unknown and a score of (-) was assigned.

## 2. Achievability

### 2.1 Marketability

(+)	0	(-)
Site is under option to a developer.	Site is being actively marketed for development or enquiries have been received from a developer.	Site is not being actively marketed.

This assessment was undertaken with reference to proformas from the Land Promoter/Developer Survey. In the survey, respondents were asked if their site was:

- Owned by a developer;
- Under option to a developer;
- Being marketed for sale through a land agent;
- Subject to developer enquiries; or
- No marketing undertaken.

For sites where a response to this question was received, the information was used to allocate an appropriate score in line with the aforementioned criteria. For sites where a promoter response had either not been received, or where the response to the aforementioned question was either blank or unclear, reference was made to equivalent information from the SLAA database.

Where data was available neither from the survey nor the SLAA database, it was assumed for all sites where pre-application enquiries had been received by the Council or where planning applications had been submitted that the site was being actively marketed and a score of 0 was assigned. This is assumed given these sites are being actively promoted for development through the planning process. In

other cases, it was assumed that the site had not been marketed for development and a score of (-) was assigned.

## 2.2 Site viability

(+)	0	(-)
No viability issues identified.	Site viability is marginal or weaker demand for development.	Viability and the market for development is poor.

This assessment was undertaken with reference to proformas from the Land Promoter/Developer Survey. Respondents were asked whether any initial estimates of viability had been undertaken and to provide details of any such assessments. For sites where a response to these questions had been received, the information was used to allocate an appropriate score in line with the aforementioned criteria. In instances where viability was found to be marginal, details of any proposed mitigation were provided, where available.

In cases where promoter responses had either not been received, or where the responses to the above questions were either blank or unclear, reference was made in the first instance to any viability testing undertaken as part of the North Weald Masterplan (where applicable), or otherwise to the SLAA database. This provided an assessment of viability for each site based on its location and the geographical viability testing undertaken as part of the Stage 1 Assessment of the Viability of Affordable Housing, Community Infrastructure Levy and Local Plan (2015).

## 2.3 On-site physical and infrastructure constraints

(+)	0	(-)
There are no known on-site constraints which would impact upon deliverability.	On-site constraints have been identified but mitigation or design solutions mean that there would be no impact upon deliverability.	Identified on-site constraints may impact upon deliverability.

This assessment was undertaken with reference to proformas from the Land Promoter/Developer Surveys. The assessment considered whether there were any known on-site physical or infrastructure constraints and the extent to which these might impact upon the availability of the site and the deliverability of development. Through the survey, developers and landowners were asked whether any of the following constraints were present on-site:

- Flood risk and surface water;
- Contamination;
- Topography;
- Utilities connections, including gas, water, electricity and telecoms; and
- Highways.

Where a constraint was identified, respondents were then asked to identify how this would be mitigated. Scores were awarded on the basis of the identification of

mitigation measures, or sufficient demonstration that identified constraints would not impact upon deliverability (for example, in cases where there were no existing utilities connections but where nearby grid supplies were available). An element of professional judgement was used to determine the final score.

In cases where promoter responses had either not been received, or where the responses these questions were either blank or unclear, reference was made to information from the SLAA database, which focused specifically on the presence of on-site utilities and also queried more generally the presence of wider physical constraints.

Where no information was available from either the survey or the SLAA database sites were automatically assigned a score of (+), as no constraint was identified.

#### 2.4a Primary Schools (Planning Area)

(+)	0	(-)
Site is located within a Primary Forecast Planning Group that has existing and future capacity.	Site is located within a Primary Forecast Planning Group that does not have capacity, however has the potential to expand in the future.	Site is located within a Primary Forecast Planning Group with no capacity, and limited scope to expand in the future.

This assessment was undertaken using quantitative GIS analysis, supplemented by qualitative assessment in relation to the expansion potential of primary schools. Sites were scored according to the capacity trajectory of the Primary School Forecast Planning Group (FPG) they were located within. Data associated with these groups, including the spatial extents, was provided by Essex County Council. Where sites were located on the boundary of two FPGs a score was assigned according to the location of the site's central point, reflecting the most appropriate FPG for the majority of the site.

The current and forecast capacity was calculated for individual schools within each FPG, in line with the approach taken in the *Commissioning School Places in Essex 2015-2020* report (ECC, 2016). An additional 5% headroom was added to each individual school to allow for mid-year admissions and operational flexibility (as advised by the Department for Education). The sum of the individual school capacity (with the 5% headroom) minus the total pupil Number on Roll (NOR) demonstrated the total capacity (available spaces) within the existing school provision of each FPG.

Based on professional judgement, a 'tipping point' of 5% of the total capacity of existing schools provision was used to determine whether each FPG has sufficient capacity to accommodate growth. Where available capacity exceeded this 5% 'tipping point', FPGs were considered to have sufficient capacity. Where available capacity fell below the 5% total capacity, the FPG was considered to have insufficient capacity.

The capacity of each FPG was considered alongside the potential for existing schools within the FPG to be expanded as well as the identification of new school sites. A professional judgment was made on the expansion potential of FPGs,



based on the professional viewpoints of officers in the Pupil Planning Team at Essex County Council.

## 2.4b Primary Schools (Individual)

(+)	0	(-)
Site is located within 1km of a primary school with existing and future capacity.	Site is located within 1km of a primary school with either a current or forecast capacity deficit	Site is not located within 1km of a primary school.

This assessment was undertaken using quantitative GIS analysis. It initially considered the distance of sites from primary schools, which included all primary schools within Epping Forest District and those located within 1km of the District boundary. Distance was calculated based on the network distance between the centre point of the schools and sites.

Capacity figures for individual schools in the District were taken from the *Commissioning School Places in Essex 2015-2020* report (ECC, 2016). Capacity data for primary schools outside of the District was obtained directly from the relevant local authority, and was used to calculate current and future capacity. An additional 5% headroom was incorporated to each individual school capacity to allow for mid-year admissions and operational flexibility (as advised by the Department for Education).<sup>9</sup> The current net capacity figures for each school was based on the 2014/15 academic year. The pupil NOR reflect the pupil count at each school in May 2015. The forecast NOR figures used were for the 2019/20 academic year, in line with the data provided in the *Commissioning School Places in Essex 2015-2020* report (ECC, 2016).

Based on professional judgment, a school was considered to have surplus capacity where the overall net capacity exceeded 10 pupils. This figure was considered a suitable ‘tipping point’ whereby additional school provision would need to be considered.

## 2.5a Secondary Schools (Planning Area)

(+)	0	(-)
Site is located within a Secondary Forecast Planning Group that has existing and future capacity.	Site is located within a Secondary Forecast Planning Group that does not have capacity, however has the potential to expand in the future, either through the expansion of existing schools or the provision of a new school site.	Site is located within a Secondary Forecast Planning Group with no capacity, and limited scope to expand in the future.

<sup>9</sup> The capacity figure for St John Fisher Primary school was slightly discounted to reflect the faith-based admissions criteria and the much larger catchment area.

This assessment was undertaken using quantitative GIS analysis, supplemented by qualitative assessment in relation to the expansion potential of secondary schools. Sites were scored according to the capacity trajectory of the Secondary School FPG they were located within. The spatial extents of these groups were provided by Essex County Council. Sites located on the boundary of two FPGs were allocated according to the location of the site's central point, reflecting the most appropriate FPG for the majority of the site.

The current and forecast capacity was calculated for individual schools within each FPG, in line with the approach taken in the *Commissioning School Places in Essex 2015-2020* report (ECC, 2016). An additional 5% headroom was added to each individual school to allow for mid-year admissions and operational flexibility (as advised by the Department for Education). The sum of the individual school capacity (with the 5% headroom) minus the total NOR demonstrated the total capacity (available spaces) within existing school provision of each FPG.

Based on professional judgement, a 'tipping point' of 5% of the total capacity of existing schools provision was used to determine whether each FPG has sufficient capacity to accommodate growth. Where available capacity exceeded this 5% 'tipping point', FPGs were considered to have sufficient capacity. Where available capacity fell below the 5% total capacity, the FPG was considered to have insufficient capacity.

The capacity of each FPGs was considered alongside the potential for existing schools within the FPG to be expanded as well as the identification of new school sites. A professional judgment was made on the expansion potential of FPGs, based on the professional opinions of officers in the Pupil Planning Team at Essex County Council.

### 2.5b Secondary Schools (Individual)

(+)	0	(-)
The site is located within 1km of a secondary school with current capacity and no forecast deficit	Site is located within 1km of a secondary school with either a current or forecast capacity deficit	Site is not located within 1km of a secondary school

This assessment was undertaken using quantitative GIS analysis. It initially considered the distance of sites from secondary schools, which included all secondary schools within Epping Forest District and those located within 1km of the District boundary. Distance was calculated based on the network distance from the school to the centre point of the schools and sites.

Capacity figures for individual schools in the District were taken from the *Commissioning School Places in Essex 2015-2020* report published by Essex County Council.<sup>10</sup> An additional 5% headroom was incorporated to each individual school capacity to allow for mid-year admissions and operational

<sup>10</sup> The capacity figure for Davenant High school was slightly suppressed to reflect the faith-based admissions criteria and the much larger catchment area.

flexibility (as advised by the Department for Education). The current net capacity figures for each school was based on the 2014/15 academic year. The pupil NOR reflect the pupil count at each school in January 2015. The forecast NOR figures used were for the 2019/20 academic year, in line with the data provided in the *Commissioning School Places in Essex 2015-2020* report (ECC, 2016).

Based on professional judgment, a school was considered to have surplus capacity where the overall net capacity exceeded 10 pupils. This figure was considered a suitable ‘tipping point’ for when additional school provision will need to be considered.

## 2.6 Access to open space

(+)	0	(-)
Site is located within 400m of existing publicly accessible open space, or there are proposals for new on-site open space provision as part of the development	Site is located 400-600m from existing publicly accessible open space	Site is more than 600m from existing publicly accessible open space

This assessment was undertaken in two stages. Initially, sites were assessed using quantitative GIS analysis. They were scored in line with the aforementioned criteria based on their distance from managed open spaces, informal recreation grounds, woodland, and children’s playgrounds, as identified in the Epping Forest District Open Space, Sport and Recreation Assessment (2012). Distance was calculated based on the network distance from the open space to the central point of the site. The distance thresholds for the assessment were established in line with the Open Space, Sport and Recreation Assessment and through contextual information provided by Council specialists.

Following this, a further qualitative assessment was undertaken to identify where new on-site public open space was proposed by landowners and developers as part of their developments. This assessment drew on additional information supplied through the survey, as well as contextual information in the Council’s SLAA database. Scores were adjusted as appropriate to reflect these proposals.

## 2.7 Health

(+)	0	(-)
Site is located within 1km of a GP surgery with capacity	Site is located within 1km of a doctors surgery with no capacity	Site is not located within 1km of doctors surgery

This assessment was undertaken using quantitative GIS analysis. It considered the distance of sites from GP surgeries, which included all surgeries within Epping Forest District and those located within 1km of the District boundary. Distance was calculated based on the network distance between the centre points of the GP surgeries and sites.

As the NHS do not provide national standards for GP to patient ratio, the calculation of surgery capacity was based on the ratio of GPs to patients versus the average ratio of GPs to patients across Essex (1 GP per 1,919 patients). Surgeries with a patient ratio exceeding this Essex-wide average were considered to have insufficient capacity. Data on the number of patients per surgery was obtained using the *Numbers of Patients Registered at a GP Practice* dataset (HSCIC, 2016), while the number of active GPs per surgery was sourced from NHS Choices GP search engine.

## 2.8 Impact on Minerals Deposits

(+)	0	(-)
None of the site is located within a minerals safeguarding area	Part of the site is located within a minerals safeguarding area, but possible impacts could be mitigated	Part of the site is located within a minerals safeguarding area and impacts could not be mitigated, or the whole of the site is within a minerals safeguarding area

Essex County Council are the competent authority for minerals and waste planning. Policy S8 of the County's Mineral and Waste Plan addresses mineral safeguarding. The policy requires a check to be undertaken of local authority proposed site allocations to identify whether the sites meet the safeguarding criteria and to establish whether a mineral resource assessment is required. All sites were sent to Essex County Council to enable them to undertake the safeguarding assessment. The scores attributed to sites were based on the conclusions of their assessment, which are presented in the proformas and the file note from Essex County Council at Appendix B1.6.3.

## 3 Cumulative achievability

In order to understand the potential cumulative impacts of development at a settlement scale, an assessment of cumulative achievability was undertaken. Rather than considering the impact of a potential allocation in isolation, this assessment took into account the wider impact of residential and traveller pitches growth on settlements for a series of infrastructure types: open space; primary and secondary schools; green infrastructure; sewage treatment; and the Central Line. These infrastructure types were considered as there is potential for cumulative growth within settlements to impact upon them.

Some aspects of the assessment of cumulative achievability required an estimation of the population by settlement at the end of the Plan period. This was estimated using the following approach:

- Ward-level and parish-level populations for 2011 were taken from the 2011 Census and applied to the settlements using a 'best fit' approach.
- To estimate the population growth in the period 2011-2016, additional population from completions was derived using the 2016 average household size taken from the 2014-based household projections, and added to the 2011 base. Settlement populations were then adjusted to be consistent with the 2014

Mid Year Estimate and 2014-based household projections for the District as a whole, which is the most up-to-date data available from the Office of National Statistics and Department of Communities and Local Government

- To estimate the population growth in the period 2016-2033, additional population from proposed site allocations, commitments and a likely level of windfall development<sup>11</sup> was derived using the forecast average household size taken from the 2014-based household projections, and added to the 2016 base.
- No average household sizes for traveller pitches is currently available. There is no official definition as to what constitutes a single traveller residential pitch; travellers require various sizes of accommodation, depending on the numbers of caravans per pitch which varies with different families living at different densities. The convention used in the site selection methodology is that a pitch accommodates a single household and typically contains enough space for one or two caravans. For the purposes of the assessment, an average of two caravans per pitch was assumed, and the forecast average household size taken from the 2014-based household projections was applied to *each* caravan (acknowledging that multiple caravans would still be considered to be a single household).

The impact of the strategic sites around Harlow have not been subject to cumulative assessment. These sites have been subject to additional, separate analysis by AECOM which is presented in their strategic sites assessment.

### 3.1 Impact on open space

(+)	0	(-)
There are no identified current deficiencies in the quantum of open space within the settlement. No open space is lost as a result of the proposed allocations in the settlement.	There are no identified current deficiencies in the quantum of open space within the settlement, however the cumulative impact of the proposed allocations would result in a reduction in land for open space.	There is a current deficiency in the quantum of open space within this settlement. The cumulative impact of the proposed allocations would result in a reduction in land for open space.

This assessment considered the cumulative impact of sites proposed for allocation on designated open space, based on the Council's Open Space, Sport and Recreation Assessment (2012). Three types of open space have been considered as part of the assessment:

- Managed open space
- Informal recreation space
- Allotments

Information on existing deficits in open space within settlements was taken from Epping Forest Open Space, Sport and Recreation Assessment (2012), which

<sup>11</sup> It is not possible to know where windfall development will occur in the future. For the purposes of the assessment, it has been assumed that approximately half of the windfall allowance will take place outside of the settlements as rural exception sites, with the rest of the allowance spread across the settlements.

updated an open space audit previously undertaken in 2009. A separate assessment of whether it would be reasonable for each allocated sites to meet their own open space needs on-site has been undertaken, which found that for the majority of sites the proportion of the site required is less than 10%. For the purposes of the assessment, it has therefore been assumed that all new development would be able to meet the newly-arising open space need resulting from the additional population.

The assessment was undertaken qualitatively, comprising a spatial comparison of existing open spaces and proposed sites to understand, at the settlement level, the level of open space that would be lost.

### 3.2 Impact on primary schools

(+)	0	(-)
The proposed allocations in the settlement can be accommodated within the current primary school places in the Schools Planning Area. There is potential to accommodate growth by either expanding schools or identifying a new site	The proposed allocations in the settlement would lead to a shortage of current primary school places in the Schools Planning Area. There is potential to accommodate growth by either expanding schools or identifying a new site	The proposed allocations in the settlement would lead to a shortage of current primary school places in the Schools Planning Area. There is limited scope to further expand school provision due to site constraints

This assessment considered the cumulative impact of the sites on primary schools. Existing capacities for primary school places within Schools Planning Areas was taken from the assessment of criteria 2.4b (see previous).

To assess the impact of future development, standards for primary school places were applied to the additional households expected through the proposed site allocations, commitments and windfall.<sup>12</sup> This additional demand was then compared with existing capacities.

The potential of the Schools Planning Areas to expand their capacity in the future (either through expansion of existing schools or the identification of a new school site) was also identified based on the assessment of criteria 2.4b.

### 3.3 Impact on secondary schools

(+)	0	(-)
The proposed allocations in the settlement can be accommodated within the current secondary school places in the Schools Planning Area. There is potential to accommodate growth by either expanding schools or identifying a new site	The proposed allocations in the settlement would lead to a shortage of current secondary school places in the Schools Planning Area. There is potential to accommodate growth by either expanding schools or identifying a new site	The proposed allocations in the settlement would lead to a shortage of current secondary school places in the Schools Planning Area. There is limited scope to further expand school provision due to site constraints

<sup>12</sup> Obtained from Essex County Council Developers' Guide to Infrastructure Contributions (2016)

Assessment on the impact of secondary school places used the same approach as primary school places (see Section 3.2 **Error! Reference source not found.** above) and drew on the findings of assessment of criteria 2.5b.

### 3.4 Impact on Green Infrastructure (GI)

(+)	0	(-)
The proposed site allocations provide opportunities to enhance Green Infrastructure	The proposed site allocations generally provide opportunities to enhance GI; on some sites there is likely to be some loss of GI	The proposed site allocations do not provide opportunities to enhance Green Infrastructure

This assessment considered, at the settlement level, the possible impact (positive or negative) on the Green Infrastructure (GI) network in Epping Forest District.

A series of spatial and overarching GI objectives have been developed, which will inform the policies in the emerging Local Plan on Green Infrastructure, These are:

- Protect sites and their setting;
- Develop green links between wildlife / trees / hedgerow assets to better integrate the network (e.g. between Epping Forest and Lee Valley Regional Park);
- Improve accessibility to heritage/landscape/woodland-related assets;
- Protect key areas of open green space;
- Protect and enhance Green Lanes / Protected Lanes;
- Improve and extend the Public Rights of Way network to better link green infrastructure assets;
- Improve east west access to the Lee Valley Regional Park – more connections to get onto the north-south towpath route and better connections between the assets within the Park;
- Improve connections to and along the River Roding;
- Improve east-west access points to River Lee towpath.

Spatial data for the assets<sup>13</sup> in the District was used to qualitatively assess the impact of proposed site allocations within settlements, taking into account the aforementioned objectives. Sites were judged to either support the objectives (e.g. by providing opportunities to develop or strengthen links between assets), or restrict their fulfilment (e.g. by using the asset for development or truncating existing links between assets).

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<sup>13</sup> Green infrastructure assets were taken to be: SAC; SPA; Ramsar; SSSI; BAP Habitats; National Nature Reserves; Local Wildlife Site; Local Nature Reserves; Registered Parks and Gardens; Conservation Areas; Ancient Woodland; Ancient Trees; Epping Forest; Corporation of London Forest, Play Spaces, Playing Fields, Allotments, Cemeteries, Protected Lanes; Green Lanes; Managed Open Space; and Woodland Semi Natural Open space.

### 3.5 Impact on Sewage Treatment

(+)	0	(-)
Settlement is served by a Sewage Treatment Works which has known spare capacity or planned additional capacity	No known capacity issues, with further engagement with Thames Water to take place as part of the Infrastructure Delivery Plan	Settlement is served by a Sewage Treatment Works with known limited capacity

Engagement with Thames Water with regard to the impact of proposed levels of development on Sewage Treatment Works (STWs) is currently being undertaken as part of the emerging Infrastructure Delivery Plan. Where information on the current and future capacity of the STWs serving settlements was held, this information was used to undertake the assessment. Further engagement with Thames Water will continue to take place as the Local Plan progresses, including more detailed modelling of the impact of proposed allocations on sewage treatment.

### 3.6 Impact on Central Line Capacity

(+)	0	(-)
The proposed allocations in this settlement do not have a material impact on the current or expected forecast peak use of the Central Line stations within Epping Forest District	The proposed allocations in this settlement are expected to result in a minor increase in the expected forecast peak use of the Central Line stations within Epping Forest District, which will not affect the capacity of these stations	The proposed allocations in this settlement are expected to result in a moderate or major increase in the expected forecast peak use of the Central Line stations within Epping Forest District, which will affect the capacity of these stations

This assessment considered the cumulative impact of growth generated by sites on the capacity of the five ‘spur’ Central Line Stations in the District (Epping, Theydon Bois, Debden, Loughton and Buckhurst Hill), which are located on the main route of the Central Line. In addition, there are three stations located on the Central Line ‘loop’ (Roding Valley, Chigwell and Grange Hill); these stations have not been included in the assessment as data of their current capacity was not available. The assessment is therefore a ‘worst case’, as in reality it might be expected that additional population would be able to utilise any spare capacity on the ‘loop’ section of the Central Line.

The assessment does not assess the impact on individual stations; this is due to the complex usage patterns in the District where some commuters choose to use a station which is not geographically proximate in order to access parking, childcare facilities and other services. It also does not take into account capacity on other parts of the Central Line or wider Transport for London (TfL) network.

Data on current train peak AM (0800-0900) and PM (1700-1800) Central Line loading across the five ‘spur’ stations within the District was taken from TfL’s Rolling Origin and Destination Survey (2014).<sup>14</sup>

<sup>14</sup> <http://data.london.gov.uk/dataset/tfl-rolling-origin-and-destination-survey>



In order to calculate the additional number of commuters that might be expected to use the Central Line as a result of the proposed sites in each settlement, the following data sources and assumptions were used:

- Anticipated additional population from each allocation was calculated using the approach set out previously;
- Forecast working age population (16-74<sup>15</sup>) for the District at the end of the Plan period was taken from the 2014-based subnational population projections;
- The proportion of residents using London Underground as their main method of travel to work was taken from 2011 Census data<sup>16</sup> at ward level and applied to individual settlements. For the purposes of the assessment it has been assumed that these proportions will continue across the Plan period;
- TfL's London Travel Demand Survey (2014) highlights that whilst the highest flows are between 0800-0900 and 1700-1800, the AM and PM peaks extend beyond these hours (0700-1000 and 1600-1900 respectively). Using the reported findings of this survey as a basis, it has been assumed for the purposes of this assessment that one third of additional users would choose to travel outside 0800-0900 and 1700-1800.

These data sources and assumptions have been used to develop an estimate of the additional commuters using the Central Line.

At the settlement level, where proposed sites would result in an increase in eastbound or westbound peak hour travel of over 3%, it was judged that this would have a material impact on the expected peak use of the Central Line. Where an increase of over 10% was estimated, it was judged that this would impact upon the capacity of the stations to accommodate this growth.

As well as commuters, it is expected that growth in Epping Forest District would lead to other types of trip generation, e.g. travel into Central London for shopping or entertainment. These trips have not been modelled because they are likely to occur outside the peak times.

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<sup>15</sup> Working age population is often taken as 16-64. For the purposes of this study 16-74 has been used to be consistent with the ages used in the Method to travel to work data.

<sup>16</sup> QS701EW - Method of travel to work

### **B1.6.3 Mineral Safeguarding Assessment**

**26 August 2016**

#### **Assessment of proposed Epping Forest Local Plan site allocations**

ECC has assessed all sites proposed for allocation in the Draft Epping Forest Local Plan that have not already gained planning permission, for their impact on mineral resources. These sites include strategic growth locations and other development sites. The assessment was carried out to ensure that finite mineral resources are not needlessly sterilised by non-mineral development, in line with national planning policy requirements (NPPF para 143). The list of sites subject to the assessment includes all those supplied to the County Council on 29 July 2016 and 25 August 2016.

These strategic growth locations/other development sites proposed in the Draft Local Plan were assessed to understand whether the whole site or a proportion lies within a mineral safeguarding area; whether that proportion was over the minimum site size threshold identified in the Essex Mineral Local Plan (MLP) Policy S8, and what proportion of this potentially workable area was outside of 250m of the settlement boundary in Epping Forest, taken as the Green Belt boundary.

The assessment concluded that none of the sites proposed for allocation in the Epping Forest Local Plan are within the thresholds identified in MLP Policy S8. This means that a Mineral Resource Assessment is not required in relation to any of these sites, and therefore the County Council will not request the inclusion of references to mineral resource safeguarding within the site allocation policy in the Epping Forest Local Plan.

#### **Reference to Minerals and Waste matters in the Epping Forest Local Plan**

##### Minerals - General introductory text

The Essex Minerals Local Plan and Essex and Southend-on-Sea Waste Local Plan in Essex are part of the statutory Development Plan, and must be considered alongside the Epping Forest Local Plan. It is suggested that the Epping Forest Local Plan makes reference to the Minerals Local Plans - the following text may be of use:

*'Essex County Council is the Minerals Planning Authority for the District, and is responsible for preparing planning policies, and assessing applications for mineral development. The Essex Minerals Local Plan (2014) forms part of the statutory Development Plan and should be read alongside the Epping Forest Local Plan. The role of the Minerals Local Plan is to ensure a steady and adequate supply of mineral resources to facilitate development over the Plan period and beyond.'*

*Currently unworked sand and gravel deposits are subject to a Minerals Safeguarding policy within the Minerals Local Plan. The safeguarding policy requires the minerals planning authority – Essex County Council - to be consulted on development proposals covering 5 hectares or more within the sand and gravel minerals safeguarded area. The Mineral Safeguarding Areas within Epping Forest District are shown on the Policies Map. Regard should be had to the requirements of the Minerals Local Plan where a development falls within a Mineral Safeguarding Area.*

*The Minerals Local Plan also designates Mineral Consultation Areas at a distance of 250m around active quarries, mineral infrastructure and mineral deposits permitted for extraction. Essex County Council must be consulted on all non-mineral related development within these areas.'*

Reference to waste planning matters should be included in the introduction to the Epping Forest Local Plan and may also be necessary within the Policies and supporting text. It is considered that consideration of the draft Plan as a whole will be needed to inform this additional text. Therefore, this will be supplied by the County Council in response to consultation on the draft Plan, as necessary. If further discussion is needed in advance of the consultation, please contact the M&W Team.