

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

Paragraphs 4.31 to 4.33 and 4.78 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 promoter⁷, 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 2, and with the emerging Local Plan policies. This review included:

- Checking that the boundary for the site accurately reflects the area that is promoted for development;
- what assumptions were made by the promoter/developer for delivering a mix of uses on site
- Understanding what parts of the site are being promoted for different land uses;
- Understanding what site-specific constraints have been identified and taken in to account in the proposals for the site.

For many sites, the Council held multiple data, which had been collected over a period of time, and in some cases there were inconsistencies between the information sources. Information received through the Land Promoter/Developer Survey, or planning applications and pre-application enquiries and site promoter responses to the Draft Local Plan consultation, 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 2. For sites where a pre-application scheme was 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.

The capacity assessments for Tranche 1 sites were revisited in 2017 to account for additional information from the land promoter/developers submitted in response to the Draft Local Plan consultation or where representations to the Draft Local

⁷ through the Call for Sites, land promoter/developer survey 2016 and 2017, response to the Draft Local Plan consultation or in other evidence documents such as the Settlement Capacity Study (2016) or the SLAA (2016)

Plan were received from other respondents, such as statutory consultees, that had a material impact of the indicative site capacity.

Table 2 Methodology for more detailed assessment of residential site capacity

	Step	Information used to check proposals against	Assessment undertaken	Output	Justification for approach
1	Reviewing Site Polygon	Site polygon (area) was identified in the SLAA, through submissions to the Regulation 18 Draft Local Plan consultation or in Call for Sites submissions made between 18 May 2016 and 31 st March 2017.	Site polygons were reviewed against the proposed site boundary indicated in the response to the land promoter/developer survey, response to Draft Local Plan consultation or other sources. Polygons were amended as necessary. Where significant parts of a site were identified by a promoter for open space or landscaping, the site boundary was amended to remove these areas.	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>2.a Major policy constraints:</p> <p>In accordance with the Site Selection Methodology, the following international and national environmental and policy constraints are considered to pose major 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"> • Internationally designated sites (Special Protection Areas, Special Areas of Conservation, Ramsar) • Flood Zone 3B • Local Nature Reserves and County Wildlife Sites • Epping Forest Buffer Land • HSE Inner Zone 	A reduction in the developable area of the land subject to the identified constraints was calculated using GIS tools.	Revised site area (ha).	These designations are identified as Major Policy Constraints in Stages 1 and 6.1A of the SSM and are considered a constraint to development, such that development of the site would likely cause significant harm.
		<p>2.b Non-major policy constraints affecting developable area:</p> <p>Given the environmental sensitivity of the following designations, and the Council's preference to minimise the loss of allotments, playing fields and car parking, 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 in addition to the major policy constraints identified at Step 2.a.</p> <ul style="list-style-type: none"> • Flood Zones 3A and 2 • Nationally designated sites (Site of Special Scientific Interest) • Ancient Woodland • BAP Protected Habitats • Local Wildlife Sites • Historic Parks and Gardens • Scheduled Monuments • Cemeteries • Allotments • Car park sites where retention of car parking on site was required. This includes Transport for London car park sites, and is informed by the Settlement Capacity Study (2016). • Part of the site which was identified as public open space. For sites that are entirely public open space, a proportion of the site area was subtracted from the site total in accordance with the promoter's proposals for retention of some public open space on site. • Where development on the site would involve the loss of a playing field. 	<p>A reduction in the developable area of the land subject to the identified constraints was calculated.</p> <p>For non-major policy constraints whose location and extent are known, such as Ancient Woodland, the reduction in developable area was calculated using GIS tools. For sites where an assumption needed to be made about the amount of land required to be removed, but where the location of this land within the site boundary could not be identified at this step, such as retention of car parking, a percentage reduction was applied to the site area.</p>	Revised site area (ha).	These designations were identified as non-major policy constraints through Stages 2 and 6.2 of the SSM, promoter material, other evidence base documents such as the Settlement Capacity Study (2016) and national planning policy. Development of this land would be undesirable.

	Step	Information used to check proposals against	Assessment undertaken	Output	Justification for approach
3	Establishing a baseline density for the site	<p>Baseline density: 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. This aligned with the emerging housing policies in the Draft Local Plan.
		<p>3a Settlement Hierarchy:</p> <ul style="list-style-type: none"> • Town • Large Village • Small Village • Hamlet 	<p>If a site is located in:</p> <p>A rural location or Hamlet: 30 dph x 100%</p> <p>Small Village: 30 dph x 115%</p> <p>Large Village: 30 dph x 130%</p> <p>Town: 30 dph x 150%</p>	Density multiplier adjusted for Settlement Hierarchy (dph).	This reflected the Council's Settlement Hierarchy (set out in the Settlement Hierarchy Technical Paper (2015)). Higher-order settlements were assumed to be capable of accommodating higher densities of development than lower-order settlements.
		<p>3b Setting - location:</p> <ul style="list-style-type: none"> • Town Centre • Town Local Centre • Large Village Centre • Large Village Local Centre • Other 	<p>If a site is located in:</p> <p>Town Centre: 150%</p> <p>Town Local Centre: 130%</p> <p>Large village centre: 130%</p> <p>Large Village Local Centre: 115%</p> <p>Other: 100%</p>	Density multiplier adjusted for Setting (dph).	This reflected the emerging policy in the Draft Local Plan which seeks to support higher densities in Town and Large Village centres that benefit from greater access to local services, and more sustainable transport options, with a lower level of increase for Local Centres, given the more limited access to local services in these locations.
		<p>3c Commuter hubs:</p> <p>Distance to nearest tube/rail station – where sites scored (+) at Stages 2 or 6.2 for criteria 3.1, indicating that the site is located less than 1 km from the nearest tube or rail station.</p>	<p>If a site scored (+) at Stages 2 or 6.2 for criteria 3.1 = density multiplier x 150%</p>	Density multiplier adjusted for Accessibility (dph).	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 Stages 2 or 6.2 were considered proximate to a commuter hub.
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>5.a Non-major policy constraints affecting density:</p> <p>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 was considered that the impacts of these constraints could 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 5.a duplicate those considered at 2.a and 2.b, this reflects that these constraints may impact both the developable area of the site, and the quantum of development, density and design of development on the unconstrained parts of the site. In these cases, the identified constraints were assessed further to establish whether any impact on a designation or asset would require a reduction in density, for instance to provide a buffer of lower density development adjacent to the sensitive designation or asset.</p> <p>The constraints considered were:</p> <ul style="list-style-type: none"> • Internationally designated sites (SPA, SAC, Ramsar) for those sites scoring (-) or (--) at Stages 2 or 6.2 for criteria 1.1, excluding those sites where impact on designated sites would be through in-combination effects only. • Nationally designated sites (SSSI) - for those sites scoring (-) or (--) at Stages 2 or 6.2 for criteria 1.2. 	<p>Qualitative assessment was undertaken of any reduction in densities of the developable area that may be required to account for site constraints. GIS tools, constraints mapping, Stages 2 or 6.2 proformas and input from the Council's specialists where this was deemed necessary, were used 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>	Density multiplier adjusted to account for site constraints and associated mitigation.	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.

	Step	Information used to check proposals against	Assessment undertaken	Output	Justification for approach
		<ul style="list-style-type: none"> • Ancient Woodland, Ancient/Veteran Trees outside of Ancient Woodland and Tree Preservation Orders (TPOs) - for those sites scoring (-) or (--) at Stages 2 or 6.2 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. • BAP Protected Species and Habitats - for those sites scoring (-) or (--) at Stages 2 or 6.2 for criteria 1.5. • Local Wildlife Site/Local Nature Reserves - for those sites scoring (-) or (--) at Stages 2 or 6.2 for criteria 1.6. • HSE Middle Zone for high pressure gas mains, and proximity to intermediate pressure gas mains and constraining oil pipelines - for those sites scoring (-) or (--) at Stages 2 or 6.2 for criteria 6.2a, and for gas pipelines where the amount of development would not likely be supported when assessed against the HSE Consultation Zones Land Use Planning Methodology. For constraining oil pipelines, a qualitative assessment was done to understand whether density should be reduced for safety, operational or maintenance concerns. • Surface Water Flooding – for those site which were identified by the Council’s Land Drainage specialist as being at risk of surface water flooding, a qualitative assessment of the level of risk and how it may impact the site configuration or capacity was undertaken. • Electricity cables and pylons – for those sites scoring (-) or (--) at Stages 2 or 6.2 for criteria 6.2b, qualitative assessment of the site against National Grid guidance document to assess any impact on site density. • Listed Buildings, Scheduled 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 Scheduled Monuments 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 depended 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 Stages 2 and 6.2 for criteria 1.8a. • Conservation Area – qualitative assessment of 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 Stages 2 or 6.2 for criteria 1.8a. • Air Quality - for those sites scoring (-) or (--) at Stages 2 or 6.2 for criteria 1.9, and which are located in close proximity to either the M25 or M11 motorways, or are located near to other poor air quality sources, qualitative assessment whether an air quality buffer to development is required which would likely result in a reduction in site capacity. 			

	Step	Information used to check proposals against	Assessment undertaken	Output	Justification for approach
		<ul style="list-style-type: none"> Access - for sites scoring (--) in Stages 2 or 6.2 assessment for criteria 6.4, assess whether access constraints would likely limit the development capacity of the site. Settlement Character – qualitative assessment, informed by (-) or (-) scores in Stages 2 or 6.2 assessment for criteria 5.2, of any reduction required to mitigate impacts on the settlement character, and considering the local context and opportunities for development to be designed and configured to mitigate the impacts without requiring a reduction in density. Any reduction to account for settlement character was reviewed in the context of other similar constraints such as Listed Buildings, Conservation Areas and the Local Setting adjustment to ensure that constraints were not double counted. 			
		<p>5.b Local Setting: In some cases the baseline density suggested for the site was higher than the density of existing development around the site; the development of the site at the baseline density could be harmful to the local setting. Additionally, some sites had particular contextual factors that needed to be considered in addition to the constraints identified through the earlier stages of the assessment. 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 5.a, or other factors where applicable. Interim guidance on residential densities for the Harlow Garden Town, prepared as part of the design visioning work (AMUP, 2017), considered local setting and character of Harlow and surrounding areas, and provided guidance on appropriate densities on the sites around Harlow. For these sites, a local setting adjustment was made to bring densities in line with this guidance, subject to other site specific factors where applicable.</p>	<p>Qualitative assessment of any reduction in densities of the developable area that may be required to account for local setting and character was undertaken using GIS tools and mapping.</p>	<p>Dwelling multiplier adjusted local setting.</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 and other evidence base documents such as the Settlement Capacity Study (2016) and the interim guidance on residential densities on sites around Harlow (2017).</p>
		<p>5.c Mixed use development: Some promoters proposed other non-residential uses within a site. In some cases, sites were located in areas where it was considered appropriate to assume mixed use development could be delivered on the ground floor e.g. along a High Street or adjacent to a London Underground Station. This stage therefore made a reduction to the residential capacity of the site to account for non-residential uses proposed on-site.</p>	<p>For all sites, it was assumed that, unless otherwise stated or where the site conditions clearly indicate otherwise, the residential capacity of the site was not constrained by the need to provide a mix of non-residential uses, or that any non-residential uses ancillary to the development were accommodated within the gross to net density conversion (see Stage 6). This was assumed for all sites unless otherwise stated in land promoter/developer survey responses, with the following exceptions:</p> <ul style="list-style-type: none"> the site is identified in North Weald Bassett Masterplanning Study(2014), a Development Brief or the Settlement Capacity Study (2016) which include proposals or assumptions for a mix of uses; the site is a High Street site or a London Underground Station car park site, in which case professional judgement was used to indicate potential mix, or; 	<p>Dwelling number adjusted to account for the reduction in capacity for residential uses due to the provision of non-residential uses on site.</p>	<p>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 sqm. Gross External Area, the relevant reduction in site capacity for housing was estimated using an assumed employment space plot ratio of 0.4⁸.</p>

⁸ 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 was 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).

	Step	Information used to check proposals against	Assessment undertaken	Output	Justification for approach
			<ul style="list-style-type: none"> the site is a Strategic Site around Harlow, in which case a more detailed consideration of the assumed mix of uses and provision of infrastructure was undertaken by the Council. This included understanding whether a reduction in site was required to account for non-residential uses, provision of infrastructure including sustainable transport corridors, schools/health facilities, and open space. Given the scale of these sites and their likely infrastructure needs, it was considered that these requirements may not be sufficiently accounted for through the gross to net density conversion at Step 6. For these sites, the more detailed consideration of a mix of uses is provided on the reverse of the proforma. 		
6	Gross to net density conversion	Gross to Net ratio residential density conversion. This was required to ensure that the capacity assessment made sufficient allowance for land within the site which will be required to account for non-residential items such as major distributor roads, education and community uses, other land uses such as retail and employment which are incidental to the development, and larger areas of strategic open space provision such as recreation areas and landscape buffers. The ratio varies depending on site size; larger sites were assumed to require more land take for non-residential 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.	Larger sites were assumed to require more land to be used for incidental uses, roads 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 ⁹ .
7	Calculate site capacity	<p>Calculate indicative dwelling number based on Stages 2 to 6.</p> <p>7.a Net Additional dwelling number Net additional dwelling number, calculated by deducting the existing number of units on-site from the indicative capacity.</p> <p>7.b Further site boundary amendment For a limited number of sites, the outcome of the capacity assessment (and/or additional information received on the site such as the Stage 4 and 6.4 deliverability assessment) and discussions at the Stage 4 and 6.4 workshops indicated that only part of the site should be identified for allocation. In these instances, the site boundary was amended to reflect this preferred development area. Instances where this amendment was undertaken included:</p> <ul style="list-style-type: none"> removing parts of the site that contain existing land uses that must remain in use and should not be allocated for development; where as a result of Steps 2.a and 2.b substantial areas of the site are constrained by environmental designations and it would not be 	<p>The existing number of residential dwellings located on site was calculated. This was identified through 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 individual address points on the site using GIS tools and the Council's property database.</p> <p>The existing number of residential dwellings on site was deducted from the indicative capacity number.</p> <p>An amendment to the site boundary polygon was made to account for sites where only part of the site would be recommended for allocation. This is informed by the constraints assessment at Steps 2.a, 2.b, 5.a and 5.b, and any additional information received for instance through the Stage 4/6.4 deliverability assessment.</p> <p>Where a further site boundary adjustment was made, steps 6 and 7a were repeated for the smaller site area. Additionally, any constraints affecting the developable area or density identified through steps 2a, 2b, 5a and 5b, and the resultant reduction or increase to the developable area/density multiplier were reviewed to ensure that they were still applicable to the amended site boundary.</p>	<p>Net additional residential dwelling number.</p> <p>Revised site boundary and a final updated indicative net site capacity (units) calculated based on the revised site area (ha).</p>	<p>To establish a more accurate picture of the net number of homes, which could be delivered on-site.</p> <p>To ensure that the site boundary and site capacity accurately reflected the area of land that has been identified for development as a result of decisions on site allocations.</p>

⁹ 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.

	Step	Information used to check proposals against	Assessment undertaken	Output	Justification for approach
		<p>appropriate for these areas to continue to be shown within the site boundary; or</p> <ul style="list-style-type: none"> where a site may be preferred for allocation but the quantum of development on the site should be limited to ensure that level of growth for the settlement was appropriate and in line with the Local Plan Strategy and relevant settlement vision. <p>In these cases, the site boundary was reduced so that the anticipated allocation site included only the amount of land required to deliver the preferred quantum of growth.</p>			