









Planning Policy: 'Site Capacities.'

This discussion document assesses the methodology to define a proposal's "Site Capacity" as required, but undefined, in the London Plan Policy D3 - Optimising 'Site Capacity' through the design-led approach.

1 Planning Policy Assessment

- 1.1 The current **Croydon Local Plan** does not include any logical assessment of a proposed development's acceptability with regard to the proposal's **'Site Area Capacity'** or any local limitations based upon a mechanistic assessment, reasonableness, statistical consideration or calculation. The Policies are *vague* and *subjective* which are subsequently determined by the "*professional*" and probably *natural prejudicial* judgment of Planning Officers, which cannot be challenged as there is no qualifying, 'quantifiable' definition for an acceptable determination.
- 1.2 The only current Policy for assessing "Site Capacity" placed on developers is to meet the minimum 'Internal Space Standards' as set by the London Plan Table 3.1

 Minimum internal space standards for new dwellings. Developers have realised they can squeeze as many units as possible onto a 'Site Area', irrespective of the actual physical 'Site Area' Capacity of a proposed development Site, whilst the local Area Type Setting, the local character, or public transport availability, infrastructure limitations are not considered. Thus, the Croydon Plan (2018) Policy of Table 6.4¹ was/is absolutely meaningless in managing developments throughout the whole of Croydon (which is the job description of Croydon Planners 'Development Management'. The professionalism is therefore an unquantified 'subjective assessment.'

2 Revised Croydon Plan (2021) Policy DM10: Design and character

2.1 There are only two references to "Site Capacity" in the 352 pages of the 2018 Revised Croydon Local Plan (2021), both in Policy DM10.11A

2.2 Character and growth

DM10.11A To deliver the homes that Croydon needs in suitable and sustainable locations that will accommodate higher levels of growth. In the areas of focused intensification, development should sustainably optimise **site capacity**. They may be significantly larger than existing and should:

- Achieve a step change of density, scale and height within the area of focussed intensification which enhances and evolves local characters, except for locations in the Places of Purley, Broad Green and Selhurst where place specific policy takes precedence;
- b. Have active well detailed frontages:

https://www.croydon.gov.uk/planning-and-regeneration/planning-policy/croydons-development-plan/local-plan-2018

² https://www.croydon.gov.uk/sites/default/files/2022-01/croydon-local-plan-2018-revised-2021-part-1-start-to-section-11.pdf











- Address the higher density of the development by providing amenity and communal facilities for intensified use including utilities infrastructure, play space, parking, cycle storage and refuse storage within the capacity of the site;
- d. Demonstrate innovative and sustainable design implementing mitigation measures to counter any identified food risk and e. Enhance landscape character, biodiversity and create opportunities for ecological, walking and cycling corridors.
- 6.62A Developments proposed to support urban and suburban evolution are required to provide amenities on the site and sustainably optimise <u>site</u> <u>capacity</u> in accordance with the guidance in the supplementary planning document. (presumably referencing SPD2 which has since been revoked).
- 2.2.1 As a Policy definition, this statement is pretty nigh useless as it has no definition of an acceptable or unacceptable requirement for optimisation of 'Site Capacity' and is confusing "Site Capacity" with parameters for "Growth", which is a separate Policy requirement dependent on locality designation. (SPD2 is revoked).
- 2.3 London Plan (542 Pages).
- 2.3.1 There are 14 mentions of "Site Capacity" in the 542 pages of the London Plan (2021), the majority in Policy D3 Optimising 'site capacity' through the design-led approach.
- 2.3.2 Policy D3 Optimising site capacity through the design-led approach.
 - All development must make the best use of land by following a design-led approach that optimises the <u>capacity of sites</u>, including site allocations. Optimising **site capacity** means ensuring that development is of the most appropriate form and land use for the site. The design-led approach requires consideration of design options to determine the most appropriate form of development that responds to a site's context and capacity for growth, and existing and planned supporting infrastructure capacity (as set out in Policy D2 Infrastructure requirements for sustainable densities), and that best delivers the requirements set out in Part DE Where development parameters for allocated sites have been set out in a Development Plan, development proposals that do not accord with the site capacity in a site allocation can be refused for this reason.
 - B Higher density developments should generally be promoted in locations that are well connected to jobs, services, infrastructure and amenities by public transport, walking and cycling, in accordance with Policy D2 Infrastructure requirements for sustainable densities. Where these locations have existing areas of high-density buildings, expansion of the areas should be positively considered by Boroughs where appropriate. This could also include expanding Opportunity Area boundaries where appropriate.
 - C In other areas, incremental densification should be actively encouraged by Boroughs to achieve a change in densities in the most appropriate way. This should be interpreted in the context of Policy H2 Small sites.
 - 3.3.1 For London to accommodate the growth identified in this Plan in an inclusive and responsible way every new development needs to make the most efficient use of land by optimising **site capacity**. This means ensuring the development's form is the most appropriate for the site and land uses meet identified needs.











3.3.2 A design-led approach to optimising <u>site capacity</u> should be based on an evaluation of the site's attributes, its surrounding context and its **capacity for growth** to determine the appropriate form of development for that site.

2.3.3 Monitoring density and site capacity

- 3.3.21 Comparing density between schemes using a single measure can be misleading as it is heavily dependent on the area included in the planning application site boundary as well as the size of residential units. Planning application boundaries are determined by the applicant. These boundaries may be drawn very close to the proposed buildings, missing out adjacent areas of open space, which results in a density which belies the real character of a scheme. Alternatively, the application boundary may include a large **site area** so that a tall building appears to be a relatively low-density scheme while its physical form is more akin to schemes with a much higher density.
- 3.3.22 To help assess, monitor and compare development proposals several measures of density are required to be provided by the applicant. Density measures related to the residential population will be relevant for infrastructure provision, while measures of density related to the built form and massing will inform its integration with the surrounding context. The following measurements of density should be provided for all planning applications that include new residential units:
 - 1. number of units per hectare
 - 2. number of habitable rooms per hectare
 - 3. number of bedrooms per hectare
 - 4. number of bedspaces per hectare.
- 3.3.23 Measures relating to height and scale should be the maximum height of each building or major component in the development. Boroughs should report each of the required density measures provided by the applicant when they submit details of the development to the London Development Database. The following additional measurements should be provided for all major planning applications:
 - 1. the Floor Area Ratio (total Gross External Area of all floors / site
 - 2. the Site Coverage Ratio (Gross External Area of ground floors /site area)
 - 3. the maximum height in metres above ground level of each building and at Above Ordinance Datum (above sea level).
- 2.3.4 The fundamental single parameter, which is required to determine most of these requirements, viz: the "Site AREA" in sq.m. or hectares, is **not** listed as a requirement in **Policy D3** in the definition of "Site Capacity". The only mention of Site 'AREA' is for insertion on a proposal's Application Form.
- 2.3.5 In addition, the **Site AREA** in sq.m. or hectares is **NOT** even listed as a requirement in the **validation "Check List" (2018)** as only a marked-up plan to show the site boundaries are specifically required. The **Site Area** in sq.m. or hectares needs to be included as a provided requirement in the **validation Checklist.**
- 2.3.6 The assessment of Policy D3 indicates a list of objectives which are to be clarified by the production of a London Plan Design Guide ("Optimising Site Capacity" -February 2022) which has been drafted for consultation but has yet to be published

³ The "Application Boundaries" are determined by the available 'Site Area' or Land ownership of the development Site (Land Registry Title Deeds); see certificates of ownership on the Application Form.











as an agreed adopted policy guidance. **MORA** responded to this consultation,⁴ but we have not seen any results of our submissions to date. **The London Plan Website** as of December 2022 stated: "Public consultation on the guidance closed on 27 March 2022. A final version of the guidance will be published later in 2022". We are now in 2023 and still waiting!

- The London Plan Design Guide (LPDG) "Optimising Site Capacity" issued for consultation gave no methodology to actually assess a development proposal's "Site Area Capacity" in fact the fundamental main parameter for determining "Site Capacity" i.e., the actual "Site AREA" in sq.m. or hectares of a proposed development is not even quoted or mentioned as a required parameter in the draft LPDG for "Optimising Site Capacity" 5, so it is extremely unclear whether the London Plan Design Guide will be of any use or significance. See LPG Optimising Site Capacity Reference 3 para 5.3 'Worked example' Indicative site capacity does NOT include the development proposals "Site AREA" or the local "Area Type or Setting" as an input parameter(s) to establish a development proposals "Site Capacity"!
- In light of this unsatisfactory situation within the Planning Fraternity, we require a methodology to determine the appropriate "Site AREA Capacity" for any development proposal and then to evaluate any reasonable 'acceptable ± or % deviation or tolerance' from that requirement for the actual proposal put before the LPA for evaluation and any deviation or tolerance from the requirement to be justified by the Case Officer or LPA, prior to determination.

3 Site Capacity requirements (Design Code)

- 3.1 The requirement of a **Site must** be within the **National Model Design Code Area Type Housing Density (Range)** for the **Area Type Setting.**
- 3.2 The Locality **must** have the **supporting infrastructure** to meet the requirements of the **Area Type Setting**.
- The proposal **must** be within the **Floor Area Ratio** recommended by the **National Model Design Code & Guidance** for the **Area Type Setting**.
- The Proposal **must**, for the proposed number of **Units**, meet the appropriate **Gross Internal Areas** (GIA) to meet **London Plan Table 3.1 Minimum Space Standards** (plus **5**% as recommended by the London Plan Housing Design Standards Supplementary Planning Guidance SPG).
- The proposal must have adequate Parking Provision for the Local PTAL and Area Type in accordance with the London Plan Policy Table 10.3. Parking must have acceptable manoeuvrability (Swept Paths) for ingress and egress, and have appropriate visibility splays, with a minimum number of disabled Bays as defined by the London and Croydon Local Plans.
- 3.6 The proposal **must** meet the London Plan Table 3.1minimum **In-Built Storage.**

4 https://www.london.gov.uk/programmes-strategies/planning/implementing-london-plan/london-plan-guidance/optimising-site-capacity-design-led-approach-lpg

https://www.london.gov.uk/sites/default/files/optimising_site_capacity_-_a_design-led_approach_publish_for_consultation.pdf









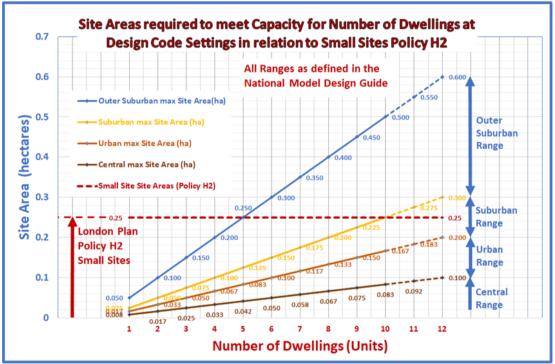


- The proposal **must** meet the minimum **Private Amenity Space** requirements of the **London and Croydon Local Plans.**
- 3.8 For **Flats & HMOs** a proposed development, must have minimum **Communal Open Space** requirement (if equal or greater than (=>) 5Units).
- 3.9 For **Houses, Flats & HMOs** a proposed development must have Minimum **Play Space** for Children of **10sq.m. per child** of the probable number of children of the future occupants of the development (Bedspaces) (presumably not including any ground floor Private amenity garden space for the children of the ground floor apartments if they have adequate private outside garden amenity space).

4 Site Capacities - Housing Densities (Units/ha)

4.1 Assuming the **Housing Densities** are as defined in the **National Model Design Code** (**NMDC**) and **Guidance** they should follow a linear progression of incremental number of Units against the **Site Area** for each **Area Type Setting**, **Outer-Suburban**, **Suburban**, **Urban and Central**, and will follow the simple linear function with incremental increase in Number of Units:

 $y = \frac{\delta y}{\delta x} \cdot x + c$ where y = Site Area, $\frac{\delta y}{\delta x}$ = rate of change of y wrt x, and x = Incremental number of Housing Units, and c = y when x = 0.



Graphical Illustration of Site Area Capacity Ranges for Number of Units at each Setting, Outer-Suburban, Suburban, Urban and Central for 1 to 12 Units to show how these limits should be extrapolated for higher number of Units.

4.2 The **illustration** (Above) and **Table** (below) could be extended in the event of a proposal of greater than **the units shown** being presented, (possible but unlikely); developments =>10 Units would need to include affordable housing and there is not much incentive in development proposals = to or >10 Units. However, the analysis could simply be extended linearly by *increasing x*.











Using the formula $y = \frac{\delta y}{\delta x} \cdot x + c$; where c = 0.

| Site Capacities: | | | | | | | | | | | | |
|-----------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Number of Dwellings | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| Outer Suburban max Site Area(ha) | 0.050 | 0.100 | 0.150 | 0.200 | 0.250 | 0.300 | 0.350 | 0.400 | 0.450 | 0.500 | 0.550 | 0.600 |
| Outer Suburban min Site Area (ha) | 0.025 | 0.050 | 0.075 | 0.100 | 0.125 | 0.150 | 0.175 | 0.200 | 0.225 | 0.250 | 0.275 | 0.300 |
| Suburban max Site Area (ha) | 0.025 | 0.050 | 0.075 | 0.100 | 0.125 | 0.150 | 0.175 | 0.200 | 0.225 | 0.250 | 0.275 | 0.300 |
| Suburban min Site Area (ha) | 0.017 | 0.033 | 0.050 | 0.067 | 0.083 | 0.100 | 0.117 | 0.133 | 0.150 | 0.167 | 0.183 | 0.200 |
| Urban max Site Area (ha) | 0.017 | 0.033 | 0.050 | 0.067 | 0.083 | 0.100 | 0.117 | 0.133 | 0.150 | 0.167 | 0.183 | 0.200 |
| Urban min Site Area (ha) | 0.008 | 0.017 | 0.025 | 0.033 | 0.042 | 0.050 | 0.058 | 0.067 | 0.075 | 0.083 | 0.092 | 0.100 |
| Central max Site Area (ha) | 0.008 | 0.017 | 0.025 | 0.033 | 0.042 | 0.050 | 0.058 | 0.067 | 0.075 | 0.083 | 0.092 | 0.100 |

Table of Site Areas (ha) for up to 12 Units for the various Area Type Settings

- 4.3 The Higher limit for 'Central' Settings is limited by the Minimum Internal Space Standards, London Plan Table 3.1 and National NPPF Design Code Space Standards. The ultimate requirement to meet Minimum Internal Space Standards (London Plan Table 3.1) will ensure Central Settings is NOT the absolute limiting parameter. Thus, High Rise Blocks of apartments in a Central Area Type Setting for Housing & Residential Density is limited only by the "Minimal Internal Space Standards".
- Thus, **Site Area** in **Outer-Suburban** and **Suburban Settings** for **9 dwellings** should be within the **Site Area** ranges:

 $y_{max} = 9/20 =$ **0.450 ha** and $y_{min} = 9/40 =$ **0.225 ha (Site Capacities) Outer Suburban** $y_{max} = 9/40 =$ **0.225 ha** and $y_{min} = 9/60 =$ **0.150 ha (Site Capacities) Suburban**

4.5 For general assessment:

Site Area Limits in **hectares** is given by: $y \approx \left(\frac{\delta y}{\delta x}\right)x$ as c=0 which for; Outer Suburban Site Area limits in hectares between : $\approx 0.05x$ $to \approx 0.025x$ Suburban Site Area limits in hectares between: $\approx 0.025x$ $to \approx 0.0167x$ Urban Site Area limits in hectares between: $\approx 0.0167x$ $to \approx 0.0083x$ where $x=number\ of\ Units$

- This simple methodology allows control of **Housing Densities** in accordance with the proposal's **Site Area** as defined in the **NPPF Design Code** and the **local setting** (Character) where currently <u>absolutely none exists</u> in either the **Croydon Local Plan (2018)** or the **Draft Revised Local Plan (2021)** as published on the Council Website or the **London Plan (2021)** or, as currently published for consultation, the **London Plan Design Guide** (LPDG) "**Optimising Site Capacity**".
- 4.7 This Policy provides guidance on the acceptable nominal "Site Capacities" for development proposals. If a Development proposal deviates ± or % from the "Site Area Capacity" defined by this policy, officers should either specify the allowed tolerance or percentage tolerance and/or provide Justification for any Tolerance deviating from the stated Policy considered acceptable, ensuring supporting infrastructure is available or planned.
- 4.8 We need assurance that these simple Policies are included in the Revised Croydon Plan or are referenced in any supporting Design Guidance to give adequate weight to the requirement. Any approved proposal, deviating from the ranges set out, requires full and detailed justification by Planning Officers.





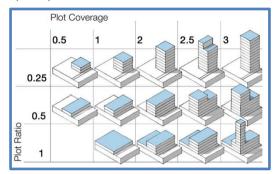






5 Plot Area Ratio and Plot Coverage Ratio:

- 5.1 Another parameter relating to "Site Capacity" is the Plot Area Ratio (sometimes referenced as Floor Area Ratio) and the Plot Coverage Ratio.
- 5.2 Plot Area Ratio (PAR) or Floor Area Ratio (FAR)
- 5.2.1 The Plot Area Ratio or Floor Area Ratio is the ratio between the total building internal floor area (GIA) and the site area, i.e., Gross Internal Area ÷ Site Area,
- 5.2.2 The **Plot Coverage Ratio** (PCR) is the proportion of the site area occupied by buildings i.e., Gross External Area of the Footprint ÷ Site Area.



- These two measures can be combined to further control development and should be used alongside good design principles. The **Plot | Floor Area Ratio** (PAR or FAR) (GIA ÷ Site Area) should be (less than) <0.5 for **Outer Suburban** and **Suburban** Site Area Type Settings as defined by the **National Model Design Code & Guidance.**
- 5.3 The **Plot Coverage Ratio** requires the footprint of the proposal ÷ Site Area. The calculation requires proposals to define the **Building footprint**. & **Site Area** in sq.m.
- The nominal value of this ratio needs to be related to the **Area Type Setting** by the **LPA** and defined by the **LPA** in their Policy proposals as it is not currently defined in the **National Model Design Code & Guidance** or other policy information.
- 5.5 All these fundamental parameters and numerical values should be provided by a proposed developer and included in proposals 'validation Check List'.

6 Site Capacities - Residential Density (bedspaces/ha)

- It is people who require supporting infrastructure and accessibility to **Public Transport Services** rather than 'Habitable Rooms' or 'Housing Units' and therefore the appropriate parameter for Residential Density is 'persons per hectare' or (bedspaces/ha) NOT Habitable Rooms or Units per hectare. 'Habitable Rooms,' as a function of measuring Residential Densities is flawed when open plan developments are offered.
- As the Area Type Settings are based upon the National Model Design Code Guidance, we can use a National average value of Unit Occupancy using the Statista ⁶ National UK Unit Occupancy as a conversion factor from Units/ha to persons/ha or bedspaces/ha. We do not currently have limits to calculate local Residential Densities for the Settings in terms of occupants per hectare or bedspaces per hectare. However, the Office for National Statistics (ONS) state that the average National Housing occupation per housing unit Nationally is 2.36 persons (at 2021).

⁶ https://www.statista.com/statistics/295551/average-household-size-in-the-uk/



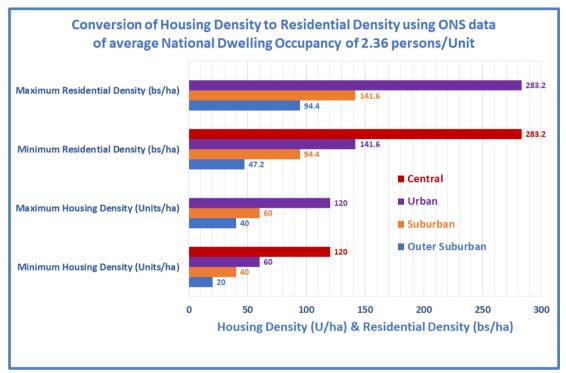








- Therefore, we can assume *Nationally*, the Outer-Suburban Setting Housing Density at 20 to 40 Units/ha would have 20 x 2.36 Persons/ha ≈47.2 persons/ha to 40 x 2.36 persons/ha ≈94.4persons/ha. Similarly, for Suburban Settings with Housing Density of 40 Units/ha would have ≈94.4persons/ha to 60 x 2.36 persons/ha ≈141.6persons/ha and Urban Settings, 60 to 120 units/ha would have 141.6persons/ha to 283.2persons/ha. And finally, Central Settings would have a minimum of 283.2persons/ha.
- These **Residential Density** limits for each of the **'Settings'** provide additional **Design Code** parameter guidance for each proposal and are shown Graphically compared with **Housing Densities** below.



Housing Density (Units/ha) and Residential Density (bedspaces/ha) for each setting (Outer Suburban, Suburban, Urban & Central) Based Statista data from National Unit Occupation Statistics.

7 Residential Density and Public Transport Accessibility

- 7.1 It is presumed that the **Area Type** as defined by the **National Model Design Code & Guidance** at the **low value of the Density Range** would be of **Lower PTAL** and the **Higher of the Density Range** at the **Higher PTAL**.
- 7.2 The distribution over the **lower** and **higher Ranges** should incrementally increase **linearly** from **PTAL Zero** through to **PTAL 6** as defined by **TfL** in proportion with the increase in **Residential Density** across the ranges of **Area Types** from the minimum of **Outer Suburban** at **Zero PTAL** to the maximum **Urban** at **PTAL 6**.
- 7.3 The PTAL for **Central** would presumably increase from **6** through **6a an 6b** but it is uncertain what the equivalent numerical value is of both 6a and 6b as the range maximum is undefined. However, it is assumed that the increase would follow the same trajectory and be a linear extension of the progression.



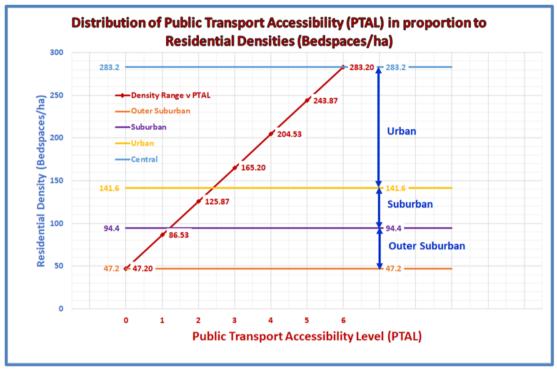








7.4 **PTAL Zero** is the lowest **TfL rating** and would be appropriate for any **Area Type** below "Outer Suburban".



<u>Graphical illustration of distribution of Public Transport Accessibility (PTAL)</u> <u>in proportion to the local Residential Density (Bedspaces/ha)</u>

- 7.5 Thus using the National occupancy of 2.36 Persons/Unit for conversion of National Housing Density (Units/ha) to National Residential Density (Bedspaces/ha) we can plot the required preferred Public Transport Accessibility across the Area Types defined by the National Model Design Code & Guidance.
- 7.6 The TfL Public Transport Accessibility does not align with the Area Type Settings as defined by the National Model Design Code & Guidance. For example, the TfL range for Suburban extends from 150hr/ha at Zero PTAL to 350hr/ha at 6 PTAL and Urban extends from 150hr/ha to 700hr/ha. However, there is no defined relationship between habitable rooms and persons per dwelling or persons per hectare. The unit for Residential Density as defined by TfL is habitable Rooms/hectare, which is not a rational parameter, as "Habitable Rooms" do not require infrastructure or other supporting requirements such as Public Transport Accessibility.
- 7.7 The most obvious parameter for **Residential Density** is 'people per hectare' which is the *occupancy* of the development in terms of bedspaces per hectare (bs/ha) but **TfL** has **Suburban**, **Urban** & **Central** designations in **hr/ha**.
- 7.8 Low Residential Density localities would normally have low PTAL, and Higher Residential Density localities have higher PTAL Irrespective of Area Types as the requirement is for Public Transport to support the localities' Residents.

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⁷ https://content.tfl.gov.uk/connectivity-assessment-guide.pdf











- 7.9 If the LPA Spatial Planning Team disagree with this assessment, we would request they provide an alternative convincing proposal for the assessment of Public Transport Accessibility in relation to Residential Density or population.
- 7.10 Therefore, the **PTAL** over the range **0** to **6** should be proportionate to the increase in **Residential Density** over the ranges from **Zero** to the **higher densities** of the **Urban** range Assuming Central Areas would of necessity have the highest possible access to public transport at **PTAL** of =>**6** (6, 6a & 6b)
- 7.11 Any deviation, **± or % tolerance** from that defined would require **justification** by the evaluating Case Officer or the allowable tolerance be included in the specification of the Policy, or an alternative methodology of assessment proposed by the LPA, probably in a similar format to the recently rejected Density Matrix.

8 Inclusion in the Revised Croydon Local Plan

- We need the **Spatial Planning Team** to agree that these **Policy Guidance** definitions are acceptable and should be included in the **Revised Croydon Local Plan**, prior to consultation. This methodology allows control of densities in accordance with the **NPPF Design Code** and the **local setting** (Character) where currently <u>absolutely none exists</u> in the **Croydon Local Plan (2018)** or the **Draft Revised Local Plan (2021)** as published on the Council Website.
- 8.2 The revised NPPF (2023) proposes the following changes (Consultation 22 Dec 22 to 2 Mar 23)
- 8.2.1 Section 2 para 7 to include "The purpose of the planning system is to contribute to the achievement of sustainable development, including the provision of homes and other forms of development, including supporting infrastructure in a sustainable manner."
- 8.2.2 <u>133.135.</u> Local planning authorities should ensure that they have access to, and make appropriate use of, tools and processes for assessing and improving the design of development. The primary means of doing so should be through the preparation and use of local design codes, in line with the National Model Design Code. For assessing proposals there is a range of tools These including workshops to engage the local community, design advice and review arrangements, Policies may also make use of the nationally described space standard, where the need for an internal space standard can be justified.
- 8.3 If a Development proposal deviates **±** or % from the "Site Area Capacity" defined by this policy, Officers should either specify the allowed tolerance and/or provide **Justification** for any **Tolerance deviating** from the stated Policy.
- 8.4 If the Croydon LPA do not agree with the above analysis and proposals or the National Model Design Code & Guidance Area Type Setting assessments for Outer Suburban, Suburban, Urban and Central, we request:
 - a) Why Croydon should be any different from the National Guidance?
 - b) What makes Croydon different?











- c) What alternative values should be used for Area Type Settings of Outer Suburban, Suburban, Urban and Central?
- d) What alternative methodology is required to define Area Type Settings for localities in the Wards or Post Code Areas of Croydon?

Your comments, or criticisms, on the content and substance of this analysis would be appreciated to: Planning@mo-ra.co

Kind Regards



Derek Ritson Monks Orchard Residents' Association (MORA) Executive Committee – Planning. January 2023