Annex 1

Development density brief for consultancy work

1 Introduction

The Greater London Authority (GLA, the client) would like to commission suitably qualified consultants to carry out research on density to inform the full review of the London Plan. The work will build on the housing density study commissioned by the GLA in 2012[1]. The research is to be divided into five interlinked projects related to London Plan density policy, especially Policy 3.4 Optimising Housing Potential, and in particular its associated sustainable residential quality (SRQ) density matrix (London Plan Table 3.2).

The first project will explore the different definitions of density and the different methods for measuring density. It will consider which approach or approaches best provide an understanding of two key issues related to higher density development; urban form and number of people in an area. It will provide recommendations on how a new Mayor could take account of these in the full review of the London Plan. The project will also provide a recommended approach for estimating density for understanding housing capacity at a strategic level.

The second project seeks to understand how schemes that exceed the top of the density matrix in a selected number of relevant PTALs and settings have 'performed' relative to London Plan policy objectives since completion and what lessons can be learned for future development and policy. It will examine a selection of completed developments in London which have residential densities above the maximum figure for the respective settings in the London Plan density matrix, to establish what has worked and what hasn't in terms of policy objectives and how this knowledge can be translated into new policy. This project will also identify what type of housing different typologies and densities can deliver (for example are there typologies that are not conducive to delivering family or smaller household dwellings?). Consultants will be asked to define 'success' based on a series of criteria to be developed in discussion with the GLA (see section 3.2.2).

The third project is examining development costs and viability of higher density development in different settings and locations, and the contribution these developments have made to the supply of affordable housing in London. This study will also include a review of the differential management and maintenance costs associated with higher densities.

A forth project will provide an updated approach to understanding the character of new development and the way this relates to that of the surrounding area and exploring if/how that can be taken account of in determining a site's density.

The final project will examine the ways in which density policy may bear on the capacity of new products like starter homes and PRS to increase overall provision. More generally, the project should identify linkages between density, urban form, agglomeration economics and productivity and the ways in which density policy may enhance productivity.

2 Background and policy context

<u>Measuring and defining density (Project 1)</u>
As Policy 3.4 makes clear, it is accepted that density is the outcome of the interplay of a range of policy, financial and other considerations. Nevertheless, in practical terms it remains a key

[1] Housing Density Study, GLA 2012

measurement used to describe and plan development, particularly residential development. The London Plan SRQ matrix (Table 3.2) is predicated on the relationship between public transport accessibility and development; historically this has been considered fundamental in ensuring that development in London is sustainable in the broadest sense, and the matrix expresses this as ranges for appropriate residential density in different urban settings. The density ranges in the matrix helps implement London Plan Policy 3.4 which aims to ensure that development optimises housing output for different types of locations in London (however, in responding to this brief consultants should bear in mind that a future Mayor may wish to 'maximise' rather than 'optimise' density, as did the initial London Plan).

Density in the matrix is measured by the number of habitable rooms per hectare, and the number of residential units per hectare within the development site. However, there are various other ways to describe and measure density. For example the density of a wider area than the development site can be measured to take into account the density of the existing surrounding buildings; or the density measurement can take account of all the land uses in a mixed use site or area; or it can measure the number of people in an area rather than its land use. Other density measurements, such as plot ratio, can be used to better describe the intensity of the site being developed than units/ha or habitable rooms/ha can provide, although plot ratio on its own provides a poor description of the built form. The recommendations should also provide an understanding of how these measurements should be used with phased sites.

Lessons from higher density development and its costs (Projects 2 and 3)

The 2015 London Plan suggests at least 49,000 homes a year need to be built for the next twenty years to meet housing need. Preparatory work on the full review of the London Plan has started and suggests housing need could be somewhat higher in the future than the current London Plan suggests. Scoping work being carried out by GLA officers is investigating a number of possible options for meeting London's growing housing need; one such option is to increase the number of higher density developments, i.e. using less land to house more people. We know that many recent developments are being delivered at densities beyond those set out in the density matrix. Given this trend of building at a higher density than indicated in the density matrix and the increasing pressure for more housing in London the GLA would like to understand how schemes that exceed the top of the density matrix have performed for occupiers, neighbours and the wider community since completion, how successful they are in achieving policy objectives and what lessons can be learned for future development and London Plan policy.

The case studies should reflect a range of types of development and include a number of different PTALs and settings – for example a suburban family housing scheme in PTAL 1 that has exceed 150 habitable rooms per hectare, a central flatted scheme in PTAL 4, 5 or 6 which has exceeded 1100 habitable rooms per unit. This is for illustrative purposes only. The actual case study types will be identified as part of the commission although it is expected that a number of case studies will be of those schemes that exceed the top of the density matrix (1100 habitable rooms per hectare). It is these schemes that pose the greatest potential challenges for decision makers in terms of ensuring they are good quality, sustainable developments, not least because these types of developments are a relatively new phenomenon in London and are also a cause for concern among some stakeholders.

Higher density development inherently provides more floorspace than lower density development on the same site. However, in addition to delivering more housing other key issues are its cost, affordability and viability. Thus it is important for the GLA to understand whether increasing density has implications for the cost, affordability, and viability of the completed market and affordable residential units in different types of location and what those implications are. A particular focus for

this research is to explore whether higher density building typologies are more expensive to build and maintain and the corresponding impact on their affordability for owners and tenants. More generally, the research should identify linkages between density, urban form, agglomeration economics and productivity and the ways in which density policy may enhance productivity.

3 Scope of the Study

- **Project 1 - Measuring and defining density**

The aim of this this project is to explore different approaches to defining and measuring density and recommend a preferred approach for the London context. Secondly, the project should develop a definition for different categories of density which can be applied irrespective of the sites context to provide clarity to a significantly wide ranging debate.

The research should address the following questions:

- What are the different definitions/measures of density, and what are their advantages and disadvantages? The study should explore:
    - different spatial level measurements e.g. building footprint, site area, surrounding areas of different size (e.g. neighbourhood area) etc,
    - how to measure density in mixed use developments,
    - how to measure the impact of the development on the surrounding area,
    - how density measures can relate to the social and physical infrastructure requirement of the development.
    - The effectiveness of the application of different definitions/measures of density in other cities

- What density measure is appropriate to indicate the intensity of the development e.g. the building's form, scale and bulk?

- How can density be defined in categories which relate to different levels of relative density, such as low, medium, high within the London context?
    - Which density measurement should be used for this definition?
    - What range of densities should each category apply to?

- **Project 2 – Lessons from higher density development**

The aim of this part of the research is to investigate completed developments that are above the density matrix maximum in London to find out what has worked and what hasn't and how this knowledge can be applied to future policy to ensure future developments are successful and sustainable. It is envisaged that this part of the study will include a desktop review of existing evidence of high density developments delivered in London and other comparable cities, but the main focus will be on detailed case studies of a number of developments to understand how 'successful' high density developments are.

3..1 Case study selection

The case studies should cover a range of densities and building typologies. The appointed consultant's methodology will inform the number and selection of the case studies. However, the case studies will be agreed through discussion with the GLA steering group early in the project. In addition, while the majority of case studies should exceed the top of the density matrix for the relevant PTALs and settings, it is suggested that at least one 'control' lower density case study may

be necessary to disaggregate issues caused by higher density to those prevalent in a range of densities. However, it may be possible to draw on existing work in this area (i.e. Housing Density Study –GLA 2012)

A number of case studies should include tall buildings either individually or as part of a larger scheme. The tall buildings used in the case studies should be in three general categories:

- 30m to 60m (≈10 to 20 storeys)
- 61- 150m (≈20-50 storeys)[2]
- 150m+

3..2 Issues to investigate in case studies

The following issues set out below provide the general framework for examining the case study sites. The exact research questions will be agreed through discussion with the GLA steering group early in the study period. The survey of residents will provide analysis of who responded so equalities implications of future policy options can be identified.

- Site description
    - What is the site density - by different density measures (units/ha, habitable rooms/ha, plot ratio, etc.)
    - What are the site's land uses
    - What is the total amount of floorspace for different land uses including outside spaces and service areas?
    - How many separate property units are there within the site e.g. number of residential units, number of offices, shops etc.
    - What are the sizes of the residential units, in gross internal area, bedroom numbers and intended occupancy?
    - What is the tenure mix of the residential units (including PRS)?
    - What is the amount of affordable housing in the development- by tenure and type and was any affordable housing provided off site or as cash in lieu?
    - How many of the units meet lifetime homes standards?
        - How many units are wheelchair accessible, and how many of these are occupied by wheelchair users?
    - How many car and cycle parking spaces are there within the site and on street
        - How have any of the above metrics changed over the life of the development? (e.g. has commercial space been converted to residential use)

- Building design/site layout
    - How has the building fabric performed since completion?
    - Are there different building typologies on the site?
    - How successful is building and site layout in regard to:
        - number and location of entrances and their level of use
        - waste storage and maintenance access
        - integration of the development into the surrounding streets
        - impacts of the development on surrounding street life
    - What is the private amenity space and how well is it used?
    - How well is the communal amenity spaces used?
    - Where is the car and cycle parking located and how well have they been used over the life of the building?

[2] 150m height is the threshold for referable applications to the Mayor for buildings in the City of London

- What are the overlooking distances between flats, and are there any privacy concerns? (see perception of the development below)
- What is the floor to ceiling heights of the residential units?
- What is the number of dual and single aspect residential units?
- How many residential units share the same entrance?
- How many residential units access the same lift on each floor?
- Are there overheating issues with the buildings and what are their causes?
    - Do the single aspect flats suffer from overheating more than the dual aspect flats?
- Are there any microclimate problems within and outside the site caused by the development?
    - Has there been any mitigation measures implemented post completion?
- What percentage of units meets the BRE daylight standards?
    - Do residents in the sub-BRE daylight standard units perceive the lack of daylight as a concern?

- Management of the site (buildings and outside space)
    - How has the site been managed since completion?
        - What are residents' views of the site's management?
        - What are the views of the site's management company on problems with managing the site, ongoing management costs, and what works well?
    - What have been the service charges since completion and what do they cover?
    - What are the deliveries and servicing arrangements? Do they work? Are they disruptive (to residents, those in the surrounding area or to traffic including public transport)?
    - What are the energy costs for residents?
        - Does higher density offer efficiencies which reduce service or energy costs?
    - Are the maintenance issues and costs significantly different for the tall building developments compared to high density lower height developments?
    - How do the issues raised by these case study sites compare to lower density schemes within the density matrix? (potentially using existing case study research for comparisons e.g. GLA's Housing Density Study 2012 or a control case study)

- Perception of the development/quality of life (some of which will require survey work)
    - How satisfied with the development are its resident?
    - What are residents' concerns with the development and what do they like about it?
        - In particularly do residents have concerns over: privacy, daylight levels in dwellings, noise from within the site, overheating?
        - How have residents' satisfaction changed over time?
        - What are the residents' views on the intensity of the development– its scale, height, and form in the context of its setting?
    - Do the residents know and interact with their neighbours within the development and outside it?
    - What was the planned occupancy rate for the different land uses?
    - What has been the actual occupancy rate for the different land uses over time?
        - What is the length of tenancy for different residential tenures?
    - How have prices of the residential units in the development changed over time compared to the surrounding area?
    - Understanding transport usage and modal share in different areas of density using TFL standard survey questions.

    - What are the perceptions of the development by residents in surrounding area?

- What are their concerns with the development and what do they like about it?
- What were the concerns raised at the planning application stage?
- Do they think the development has improved the area or not?
- Has the scheme had negative or positive impact on: traffic congestion, public transport, street parking, daylight, litter, local services and shops?
- What are their views on the intensity of the development – its scale, height, and form in the context of its setting?

- **Project 3 – Affordability, development costs and viability**

This project will explore the relationship between increasing density, building height and development costs, and the delivery of affordable housing in different locations. In particular this research should determine if increasing density, particularly through the development of tall buildings, has any significant implications for development costs and long term management costs and if these have knock-on effects on the affordability of development for the owners and occupants. The project should also examine if building at 5-7 storeys can deliver high density without increased costs? In addition, this project will establish if higher density developments in London are supplying proportionally more or less affordable housing than comparable lower density and why?

The following issues are to be covered:

- Do residential units in: i) high density, ii) tall building development cost more to a) build and b) buy or rent (including service charges) than comparable lower density and lower height development?
  - If so what are the reasons for the higher costs?
  - Is there a point at which the build costs make building any i) denser, ii) higher, financially unviable, and how does this vary across London?
  - Is there a point at which building higher actually reduces affordability?
- Can lower height (5-7 storeys) buildings deliver high density development without increasing costs?
- Have high density developments (including high density tall buildings) deliver more or less affordable housing than comparable lower density developments, and what are the reasons?
- Are there particular issues in delivering affordable housing in high density or high building schemes bearing in mind that affordable housing tends to be fully occupied or even over occupied/overcrowded in practice, resulting in higher child yields?

- **Project 4 – Exploring character and development density**

The findings from the above studies and a separate piece of work being commissioned by TfL to investigate how an understanding of the level of services, jobs and social infrastructure could inform density calculations will inform the options for the London Plan's density matrix (see table 3.2 of the London Plan). However, the GLA are also interested in exploring if and how the existing character of an area should be taken into account in determining what level of density is appropriate.

The research should address the following:

- Produce an updated character map of London using the current definitions of character settings (suburban, urban and central areas) in the London Plan SRQ matrix (Table 3.2).

- Consider if and how the current character settings (suburban, urban and central areas) in the London Plan SRQ matrix (Table 3.2) should be redefined to better reflect the different character settings found in London, primarily focussing on the character of the built form.
- Propose a method for defining which of these character settings an areas falls under when considering a planning proposal; and using this method produce a character map of London.
- Identify the density range that is considered appropriate for development in each of the character settings using the existing or refined PTAL bands in Table 3.2

- **Project 5 – Why else is density important?**

The balance of probabilities suggests that London's population/housing need is likely to continue to grow at, or slightly above levels anticipated in the 2015 London Plan, but that employment growth could be higher by a third or more. Scenarios for accommodating this growth over and above existing sources are suggested in the 2050 Infrastructure Plan and through the Outer London Commission. In broad terms they are of two types: those that look to increase the supply of building land (selective 'Green Belt' release or development in the Wider SE) and those that look to make better use of London's existing built up area (e.g. intensification in appropriate town centres, Opportunity/Intensification areas, suburbs, existing large sites, surplus industrial land, housing estates). Density policy is clearly crucial to realising the development capacity of this latter group of locations, as well as other sites which will be covered in the mainstream SHLAA. The way policy can do this and its effects on the lives of Londoners is the primary concern of the four main sections of this brief.

However, density policy can also impinge on other policy concerns, not least the way the city functions economically. Research to inform previous editions of the London Plan has indicated that larger cities make a disproportionate contribution to national economies[3]. By inference, the disproportionate size of London relative to the UK's other cities makes it especially important to the overall economy[4]. At a more local level it has been shown that as population increases so does local employment[5]. Indirectly, the approach taken to density could have a bearing on these findings. Recent research has pointed more specifically to a relationship between density policy and urban productivity[6] - enhancing productivity is a key national concern[7] which could have particular implications for London.

This project should:

- Review strategic linkages between density policy and demographic and economic growth, employment creation and, in particular, productivity.
- Provide options as to how density policy might help manage these relationships; and evaluate these options in the context of Mayoral and national objectives.

[3] GLA Economics, Working Paper 17: Why distance doesn't die: Agglomeration and its benefits, 2006
[4] The law of the Primate City vs Zipf law – London's size is disproportionate relative to other western European city systems.
[5] GLA Economics, More residents, more jobs? 2015 update. This reports an increase in the resident population of 1,000 will on average have the potential to give rise to a further 171 jobs in the locality.
[6] Deloitte Real Estate. Meeting London's Future Needs. The economic opportunities and challenges of density in London. Discussion Paper 1. British Land. 2015
[7] Fixing the foundations, HMS Treasury, 2015

4 Approach

The five projects can be led separately or be part of a combined commission, however each project bid will be evaluated separately. When a consultant is bidding for more than one of the projects, they should also indicate if they would consider a commission for only one of the projects.

5 Project Management

Each project will be steered by a small steering group composed of GLA officers. The projects will be managed by Elliot Kemp, Senior Strategic Planner, London Plan Team, GLA.

The successful consultants for each of the projects will need to attend at least three steering group meetings - an initial inception meeting, presentation of the draft report and presentation of the final report. The steering group may request that the findings be presented to an expert panel before finalising the report. The lead officer will also need to be kept up to date regularly by telephone/ email.

The final reports for each project should be presented in five bound copies. An electronic copy of the report on CD/by email in Microsoft Word or other agreed electronic format.

6 Project outputs

The following outputs will be required for each project.

- Interim, Draft Final and Final reports in printed and electronic formats. The printed version of the Final report should be presented in five copies. There should be Executive Summaries in each of the staged reports.
- Bidders should cost for at least two rounds of drafting of all written material and allow for up to five days for GLA comments in each of these rounds.
- The reports should have full referencing of sources in Draft Final and Final reports according to agreed conventions. Layout and pagination should be according to agreed convention.

7 Quality Assurance

Any written reports produced should be of publishable standard. They should be concise, proof read, edited and avoid the use of jargon as far as possible.

The consultant should be prepared to receive comments from the GLA on all aspects of the work and to revise this accordingly, potentially on more than one occasion if required by the GLA.

8 Timetable

The timetables below give an *indicative* timeline for the different projects. Final timetables will need to be agreed at the project inception meeting.

The key dates are as follows:

Projects 1, 3, 4 & 5		
Stage	**Event**	**Indicative Dates**
1	Invite tender proposals	Oct 2015

2	Tenders submissions deadline	09 Nov 2015
3	Interviews (if deemed necessary)	19 Nov 2015
4	Successful consultant appointed	1 Dec 2015
5	Inception meeting: project brief refined and agreed	1 Dec 2015
6	Consultant delivers interim report	Jan 2016
7	Complete draft final report	22 Feb 2016
8	Sign off of final report	29 Feb 2016

Projects 2		
Stage	**Event**	**Indicative Dates**
1	Invite tender proposals	Oct 2015
2	Tenders submissions deadline	09 Nov 2015
3	Interviews (if deemed necessary)	19 Nov 2015
4	Successful consultant appointed	1 Dec 2015
5	Inception meeting: project brief refined and agreed	1 Dec 2015
6	Consultant delivers interim report	Feb 2015
7	Complete draft final report	23 March 2016
8	Sign off of final report	31 March 2016

9 Project budget

An indicative budget allocation for each project (excluding VAT but including expenses) is provided in the table below, although consultants are encouraged to review their methodological approaches in order to understand the level of work required for each part if they are bidding to undertake more than one of the projects.

Indicative budget allocation:

Project 1 – Measuring and defining density	£20,000
Project 2 – Lessons from higher density development	£65,000
Project 3 – Affordability, development costs and viability	£25,000
Project 4 – Exploring character and development density	£20,000
Project 5 – Why else is density important?	£10,000

10 Submissions

Submissions must include:

- A summary of the consultant's understanding of the project requirements
- The proposed approach for undertaking the work, including a project plan
- Details of the consultancy team, including their level of expertise, knowledge and skills. This should be supported by a breakdown of who will be undertaking each part of the work, the number of days each consultant will work on the project, their daily rates and their core responsibilities.
- Each part of the work should be clearly costed.
- Where a consultant is bidding for more than one of the projects, an indication of whether they would consider a commission for only one study if they were not successful for all being bid for.

Payment will be made in accordance with GLA's terms and conditions of contract (included with invitation to quote documents).

11 Evaluation criteria

A preliminary evaluation of quotations for each project will be undertaken and consultants shortlisted will be invited to interview. The final evaluation will take into account information provided at interview. The evaluation template including evidence and weightings is set out below.

Response to Specification	**Evidence**	**Weightings**
Proposed Methodology	• Sound appreciation of the issues addressed in the specification. • Realistic, concise, achievable and sustainable project methodology which addresses each of the tasks set out in the specification. • Clarity and focus of tender, including effectiveness in articulating the detailed methods to be used which provide a robust assessment.	20% 20% 15%
Quality assurance and project management	• Effectiveness of quality assurance and project management procedures for delivering the project on time.	5%
Experience in relation to the project requirements	• Evidence of working on projects of similar nature. • Experience of staff allocated to the projects, CV's to be included with the responses.	5% 10%
Price	Evidence provided in a pricing schedule	25%

The marks for each question in the evidence section (except for price) will be given in the range of 0-5, where 5 is the highest mark and 0 is the lowest mark achievable (see below).

0 - Unacceptable.	Demonstrates lack of evidence of understanding of the requirement.
1 - Poor	Does not completely meet the minimum requirement and acceptability is doubtful.
2 - Fair	Shows some evidence of understanding of the requirement but provides a limited or inadequate response.
3 - Good	Demonstrates satisfactory understanding of the requirement – meets minimum requirement.
4 - Very Good	Demonstrates good understanding of the requirement above minimum requirement.
5 - Excellent	Full and accurate understanding of the requirement with some innovation/added value.

12 Payment and stage payments

Payment will be made in accordance with GLA's terms and conditions of contract (included with invitation to quote documents).

13 Responsible Procurement Policy

Responsible Procurement is an essential factor in all the Authority's contracts. Please see link to the Responsible Procurement Policy for more information: http://www.london.gov.uk/rp/

14 Conflict of Interests

Consultants bidding for this project will need to declare any actual or potential conflicts of interest.

15 Questions and queries

Any questions about this brief should be submitted via the e-tendering system.