

GREATER LONDON AUTHORITY

[REDACTED]
[REDACTED]
(By email)

Our Ref: MGLA100119-2766

20 February 2019

Dear [REDACTED]

Thank you for your request for information which the GLA received on 9 January 2019. Your request has been dealt with under the Freedom of Information Act (2000)

You requested:

I would like to make a freedom of information request for any and all information held by the Greater London Authority which considers the connection between tall buildings and affordable housing provision; in particular, the difference in affordable housing delivery between low-rise and tall buildings.

This may include, for example, any studies commissioned by external consultants, or internal analyses of pre-existing data for the purposes of ascertaining the nature of the relationship between tall buildings and affordable housing. The essential question is whether encouraging tall buildings has a positive or negative impact on affordable housing provision.

Additionally or alternatively, I would like to request any raw data held by the Authority which considers the same issue.

Our response to your request is as follows:

We have identified the following information within scope of your request:

- a) Tall Buildings Affordable Housing and Viability for Planning Policy (and Appendix B)
- b) Stage 1 & 2 Referable Application Analysis 2016-18
- c) Stage 1 & 2 Referable Application Analysis 2011-18 [Planning Issues meeting on 10th January 2019]
- d) Data that (b) and (c) have been produced on.

Please find attached the information we hold in relation to (a). The information that the GLA holds at (b), (c) and (d) is exempt under the exemption for future publication of the FOIA. We are in the process of conducting an analysis of applications referable to the Mayor. This includes applications referable under category 1C of the Mayor of London Order (tall buildings). This

analysis together with its related data set is currently in draft form and we intend to make the raw data and analysis available to the public as a part of our 'Planning Information Hub'.

Section 22 of the FOIA provides an exemption for information that is intended to be published in the future. Information is exempt if, at the time when the public authority receives a request for it:

- the public authority holds the requested information;
- the public authority intends the information to be published at some future date, whether that date is determined or not; and
- in all the circumstances it is reasonable to withhold the information until its planned publication.

Section 22 acknowledges that public authorities must have freedom to be able to determine their own publication timetables. This allows them to deal with the necessary preparation, administration and context of publication. It is however necessary to consider whether the public interest in maintaining the exemption (and withholding the information until the publication date), is greater than the public interest in releasing the information before this date.

In this instance, it is felt that there is a greater public interest for the GLA to keep to its original timetable of disclosure. The timescales for this are before the start of the pre-Mayoral election period but should the information be ready before this, we will publish it sooner.

The public interest - i.e. the best interests of the public - is met by the GLA being open and transparent, but also by managing its resources effectively, and this includes setting reasonable publication schedules to meet this public interest. We therefore find the balance of public interest falls in maintaining the exemption and the GLA publishing this information in accordance with our existing publication timetable.

If you have any further questions relating to this matter, please contact me, quoting the reference at the top of this letter.

Yours sincerely

Paul Robinson
Information Governance Officer

If you are unhappy with the way the GLA has handled your request, you may complain using the GLA's FOI complaints and internal review procedure, available at:

<https://www.london.gov.uk/about-us/governance-and-spending/sharing-our-information/freedom-information>

Prepared by:	██████████
Title Extension	Development Viability – Expert Advisor ██████
Meeting Date:	DRAFT
Item:	Tall buildings, affordable housing and viability
Format:	
<i>Attached papers:</i>	
Purpose	

Summary

1. London has seen a significant increase in applications for residential development in tall buildings over the last 15 years. Optimising housing density through the inclusion of taller buildings has enabled the delivery of additional new homes and the draft London Plan (Policy D8) states that 'Tall Buildings have a role to play in helping London support its expected growth' as long as they are 'sustainably developed in appropriate locations'.
2. However, there are some concerns that schemes with tall buildings are not generally delivering Fast Track compliant levels of affordable housing, with the issue particularly evident in schemes in lower value outer London areas where sales values are significantly lower than inner London.
3. The first thing to understand why this is happening. Evidence for the Draft London Plan (London Plan Viability Study and Lessons from Higher Density Development) assessed notional sites and the relationship between sales values and height and the resulting impact on viability and the delivery of affordable housing (see Appendix A). These studies show that taller buildings in lower value areas are less viable than medium rise and so less able to deliver a policy compliant mix of tenures both in terms of the overall quantum of affordable housing and the minimum percentage of London Affordable Rent. A review of a range of case studies also shows that increased height does not generally deliver additional affordable housing and in a number of cases has the opposite effect. These are set out in Appendix B.
4. The reason for this is that although taller buildings do generate higher values per square foot they do not always cover the additional construction costs and so the delivery of the upper floors of a tall tower can impact on the viability of the whole scheme.
5. There are a number of reasons why this happens. Tall buildings are more expensive to build - the cost of the structure increases to withstand the increased loading; additional and more expensive plant and lifts are required to service the upper floors; and better quality cladding is needed to meet enhanced design standards and deal with practical issues such as increased impact from wind. They are also less efficient in terms of delivering saleable floor space as a greater percentage of the gross internal area is required for cores, circulation space and internal balconies than in lower rise typologies. This increases

constructions costs as a proportion of revenues. There may also be a requirement for an increased developer's return and higher finance costs due to the construction and sales risk associated with taller buildings.

6. The impact of this is that tall buildings can potentially design out affordable housing as the additional costs without the additional value reduce the surplus available for delivering affordable housing.
7. Whilst taller buildings might not deliver a Fast Track compliant percentage of affordable housing, they generally do increase the number of homes on any given site, assuming they are built out.

Background information

8. There has been a significant increase in applications for residential development in tall buildings in London over the last 15 years. These were initially generally in towers in inner London boroughs (e.g. St George's Wharf Tower, Vauxhall) with access to good public transport and employment opportunities with good views of key central London landmarks. However, applications are now coming forward for residential development in tall buildings across London including outer London town centres.
9. This type of development has been driven by increases in residential sales values across London which have more than doubled over the last 15 years. Taller buildings have also been supported through the planning system as a way of delivering increased density to respond to London's housing shortage.
10. Increasing density on development sites, through increased massing and the inclusion of towers, has historically improved viability as the value of the additional accommodation has exceeded the additional construction costs.
11. However, applications are now coming forward for residential development in tall buildings in town centres and other locations in outer London boroughs which may have good transport links but often lack proximity to employment opportunities or local amenities and do not have interesting views.
12. In these locations sale values are substantially lower than in many inner London boroughs and it is important to consider the economics of taller buildings as additional height does not always deliver additional affordable housing. Taller buildings are more expensive to build and so it is likely that they are only viable and able to deliver policy compliant affordable housing above certain sales value thresholds and subject to other viability characteristics (e.g. without high existing use values).
13. Without these values, tall buildings can effectively design out affordable housing as the additional costs reduce the surplus available for delivering affordable housing. The price point at which this happens will always need to be assessed on a site specific basis, but the research and viability testing that has been done to date shows some trends which are considered below.

GLA Research on tall buildings and the delivery of affordable housing

14. The draft London Plan Policy D8 (early suggested changes), sets out that Boroughs' Development Plans should define what is meant as a Tall Building for specific localities and this will vary in different part of London. Para 3.8.2 sets out that this policy applies to tall buildings as defined by the borough. Where there is no local definition, the policy applies to buildings over 25m in height in the Thames Policy Area, and over 30m in height elsewhere in London.

Part B of Policy D8 states that: *'Tall buildings should only be developed in sustainable locations that are identified in Development Plans. By following the processes required in parts A, B and C of Policy D2 Delivering good design boroughs should determine if there are locations where tall buildings may be an appropriate form of development, subject to meeting the other requirements of the Plan. Boroughs should identify any such locations on maps in Development Plans, and should indicate the general building heights that would be appropriate in these locations, taking account of:*

- i. the visual, functional, environmental and cumulative impacts of tall buildings (set out in part C below)*
- ii. their potential contribution to new homes, economic growth and regeneration*
- iii. the public transport connectivity of different locations.'*

15. In Policy D4 Housing quality and standards (early suggested changes), Table 3.2 details the qualitative design aspects to be addressed in housing developments, and one requirement if that alternative building forms are tested at the design stage: *'The built form, massing and height of the development should be appropriate for the surrounding context, and it should be shown that alternative arrangements to accommodate the same number of units or bedspaces with a different relationship to the surrounding context have been explored early in the design process (making use of the measures in D6.E), particularly where a proposal is above the applicable density indicated in part C of Policy D6 Optimising density'.*

16. Chapter 3 of the draft London Plan also sets out in policies D1 (London's Form and Characteristics), D2 (Delivering good design) and D6 (Optimising housing density) a number of design policies that guide the development of taller buildings and how they can be used to optimise the development capacity of appropriate site.

17. There are two studies that have looked at the relationship between tall buildings and viability which form part of the evidence base for the Draft Plan. Both were prepared by Three Dragons and commissioned by the GLA.

- London Plan Viability Study (December 2017)
- Lessons from Higher Density Development (September 2016).

18. Both studies found that there was a link between height, sales values and viability. The London Plan Viability Study considered the ability of a range of building typologies including residential schemes of up to 15/20 storeys in height in five different value bands to deliver affordable housing when the Residual Land Value was assessed against a range of Benchmark Land Values. One of the key findings of the Viability Study was that:

'Some types of development are more viable than others and this varies between value bands e.g. the higher density schemes are more viable in the higher value bands; and the lower density schemes are more viable in the lower value bands, based on current day values. It may be possible to deliver more viable developments (including at higher densities) by using a lower-rise form of development and/ or in areas with better transport accessibility; and this would

allow more certainty around affordable housing provision where values are lower.’ (paragraph 9.5.6)

19. There are a number of themes that run through both reports and these are set out below.
 - The costs of construction rise rapidly over 10 storeys and again over 20 storeys in all locations.
 - Although there is a link between height and values, the value of residential units on the upper floors needs to deliver a higher return to cover the additional costs before any additional planning benefits can be delivered.
 - In lower value areas there is a cap on values for particular units and additional height cannot increase values beyond this level.
 - Benchmark Land Values, alongside sales values and construction costs are an important factor in determining the level of affordable housing that a scheme can deliver and so need to be considered in any analysis alongside other relevant viability characteristics.
20. Appendix A provides a summary of the findings of those reports.

Review of case studies

21. Appendix B sets out in table form the details of 20 case studies of schemes with a range of heights and values to see what level of affordable housing has been delivered in each case.
22. The range of heights considered were:
 - Low-medium rise Up to 10 storeys
 - Tall buildings 11-20 storeys
 - Very tall buildings 21 storeys plus
23. The cases are grouped by height from lowest to highest rise with the tallest building included being the 69 storey tower at 1 Landsdowne Road, Croydon.
24. The table also shows the sales values with higher values shown in a darker orange. Two higher value schemes with sales value of over £1,000 per square foot are shown at the bottom of the table.
25. Affordable housing delivery is shown with schemes delivering 35% plus coloured green and schemes delivering less than 20% coloured red.
26. Lower rise development typically delivers more affordable housing with generally lower percentages in taller buildings. In cases where values are over £1,000 psf, the 35% threshold is achieved in some instances although not in every case.
27. The poorest performing schemes which include tall buildings are those in the lowest value areas such as Croydon and Ilford. The case studies include several tall buildings in areas of higher sales values where 35% or more affordable housing was secured whereas in lower value areas such as Croydon and

Lewisham the majority of taller schemes are coming forward with reduced levels of affordable housing based on viability.

28. In high value areas – over £1,000 psf – an element of the affordable housing has in some cases been delivered through the payment of a commuted sum.

Other relevant planning considerations

29. The draft London Plan requires all tall buildings to be exemplary in terms of design but they can have cumulative visual, functional and environmental impacts which require mitigation.
30. Schemes that deliver other benefits such as substantial infrastructure and/or low cost commercial space may also influence the delivery of affordable housing.
31. Increasing density will always increase the number of units and although the overall percentage of affordable housing may be lower in a taller building, the total number of affordable homes might be higher than in a lower rise scheme so could be considered more beneficial overall.
32. Although the London Plan is not unsupportive of family housing in tall buildings, some Councils may prefer this (in particular family-sized affordable housing) to be provided in lower rise buildings. If this cannot be provided on-site, the Council may prefer a commuted sum.
33. High density developments in higher value areas generally incur higher CIL charges, so contributing to borough wide infrastructure and also delivering good quality public realm.
34. The impact of taller buildings in the Build to Rent sector also requires more research to establish how it compares with private sale developments. Although this type of development generally produces lower capital values than private sales, developers are also seeking consent for this type of scheme in taller buildings and it is difficult to find evidence to support a link between flats on higher floors and higher rents. It may be that taller buildings in this sector have a more significant impact on viability than private sale schemes but this requires further research.

Appendix A

Summary of draft London Plan studies

1. The GLA has commissioned two studies that have looked at the relationship between tall buildings and viability both of which were prepared by Three Dragons:
 - London Plan Viability Study (Draft December 2017)
 - Lessons from Higher Density Development (September 2016)
2. These studies considered the viability of a number of notional schemes with differing private sales values and heights of buildings. Taking into account the relevant construction costs, each scheme was tested to see how much affordable housing they could deliver.
3. The draft London Plan Viability study considered the range of residential values across London and assumed 5 value bands, the highest being £20,000psm (£1,860psf) followed by £12,000psm (£1,115 psf) and £8,250psm (£766 psf) with the lowest two bands being £6,250psm (£580psf) and £4,250psm (£390 psf).
4. The draft report also looked at the relationship between the market value of flats and storey height. Building high provides an obvious method of attracting attention to development and creates impact for marketing purposes and there is evidence of a recognisable potential in uplift in sales price from units on upper floors. The report noted that there was little premium per extra floor for the first 10 floors but over that, prices per square metre rise by between 1.2% and 2.2% per floor. Schemes that showed the greatest increase were often in very high value areas. On the very highest floors, where dwellings on the top two or three levels are built to much higher specification, there was a significant increase in values. For the purposes of the study a simplified formula was used for value by height to assess overall sales values:

• 1-9 storeys	no uplift
• 10-15 storeys	5% uplift
• 16-20 storeys	10% uplift
• 21 storeys and higher	20% uplift
5. However, the study noted that, based on local market conditions, there could be a cap in value relating to height in some locations. A two bedroom flat will not sell for more than a certain amount in a particular location, as a flat on a lower floor in an alternative location would probably be more attractive at that price point.
6. The draft Viability Study also considered benchmark construction costs for residential development taking into account both sales values and building heights. It found that as the height of buildings increase, so does the cost of construction with an additional cost associated with high sales values relating to the higher quality fit out. The study tested buildings in four bands – 1 to 3 storeys, 4 to 10 storeys, 11-20 storeys and 21 storeys and above and found that taller buildings were more expensive to build per m2. Across all value bands the difference in construction costs from a medium rise block of 4 -10 storeys to the

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tall and very tall developments was 7.5% and 12.5% respectively. This is due to a wide range of factors including the cost of the structure and cladding that will need to withstand wind loading and mechanical and electrical installations such as high-speed lifts and complex heating installations.

7. Building efficiency is also important as tall towers are intrinsically less efficient than lower rise schemes and provide less revenue generating space per m2 of gross area than lower rise buildings. Key design criteria such as height, shape and slenderness impact on net to gross area ratios as the percentage of space taken up by the cores and services provision are comparatively high. Average efficiency on buildings of 4-10 storeys is 80% where this drops to 75% or below over 21 storeys.
8. Taking both increased costs and building efficiency into account, average sales values per square foot in a tower of 21 storeys need to be approximately 25% higher to cover additional construction costs and deliver a similar residual land value.
9. The draft Viability Report tested a range of notional schemes with different densities/building heights and assumed sales values against a range of Benchmark Land Values, assumed to be Existing Use Value plus a landowner's premium.
10. Two high density schemes, with assumed heights of over 15 storeys, were tested in a range of value bands for both Private Sale and Build to Rent schemes. Using the data from the report, the table below shows the outcome of testing the five bands against the relevant Medium Benchmark Land Value (which varies per band) where affordable housing of 35% is assumed based on 30% LAR 70% LSO.

Value band	Values £ft2	300 Dwellings for SALE 350 dph and 7-9 storeys	300 Dwellings for RENT 350 dph and 7-9 storeys	750 Dwellings for SALE 450 dph and >15 storeys	750 Dwellings for RENT 450 dph and >15 storeys
A	£1,860	Viable	Viable	£159.7m surplus	£105m surplus
B	£1,115	Viable	£37.2m surplus	£81.9m surplus	£69.6m surplus
C	£766	£11.4m surplus	£15.1m surplus	£15.5m surplus	£16.6m surplus
D	£580	£3m surplus	£2.8m surplus	Not viable	Not viable
E	£390	Not viable	Not viable	Not viable	Not viable

11. The data can also be used to look at what type of development is viable in Bands D and E at 35% affordable housing and assuming a medium BLV.

Value band	Affordable housing	
C	35%	Viable in all but lowest density
D	35%	Viable in low/medium rise and density up to maximum of 9 storeys

E	35%	Viable only in low rise and density - mix of terrace housing and flats at 2-4 storeys and 64/80 dwellings per hectare
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12. The overall findings therefore show that for the notional schemes tested, minimum values of c.£650-750 psf are required to support the delivery of affordable housing in tall buildings over 15 storeys.
13. These findings can be compared with the earlier report which also looked at taller towers. This study was based on the appraisal of a number of different residential typologies including taller buildings of 45 and 25 storey as well as 13-14 storeys at different price points and levels of affordable housing, to assess the resulting RLV against average BLVs. The study found that at both 35% and 50% affordable housing:
 - **Price band 4** (values of £465-525K per unit equivalent to £660 psf) The 13-14 storey development and the tall tower (25 storeys) were the most viable and produced similar results. The 5-8 storey development was also viable but the high tower was not viable.
 - **Price band 3** (values averaging £400k or £533psf) the most viable development was jointly the 13-14 storey tower and the 5-8 storey building with both the taller buildings being unviable.
14. These studies both show that on a notional site, higher values support the delivery of affordable housing in taller buildings. However, the case studies in Appendix B show that higher values do not always support significantly higher levels of affordable housing in this typology.

Appendix B Analysis of Schemes - Impact of taller building on delivery of affordable housing within different sales bands - under £1,000psf sale values

		GLA Ref		Name	Total No. of Units	No. of private Units	No. of Social/Affordable Rented Units	No. of Intermediate Units	Typology	Height [Dark Blue Tallest]	Private sales values average psf - low to high	Affordable Housing Offer Green=>34% Red = <20%	Comments
Planning Authority	Status	Status Date											
Barking & Dagenham	Permission granted	06-Feb-15	0766a	Lymington Mews (Lymington Place) - Phase 2, Chadwell Heath	292	173	0	119	2-4 storeys incl houses	4	£ 382	40%	Lovell scheme - all intermediate
Bexley	Permission granted	22-Dec-16	3717	36-38 Artillery Place LB Bexley	65	42	14	9	Two blocks of 6 storeys	6	£ 560	35%	Bellway
Greenwich	Permission granted FAST TRACK	27-Mar-18	1236b	40 Victoria Way, Charlton	330	215	77	38	3-10 Storey	10	£ 533	35%	FAST TRACK Fairview Homes scheme
Newham	Permission granted	29-Jul-16	3297	Gallions Quarter / Gallions Point, Atlantis Avenue, E16 2QJ	739	442	148	148	5-12 storeys	12	£ 512	40%	NHHT - consent granted 2015
Newham	Permission granted FAST TRACK	12-Oct-17	3925a	Royal Docks Service Station, North Woolwich Road	295	205	45	45	5-13 Storeys	13	£ 750	35%	FAST TRACK Applicant is Galliard Homes
Croydon	Permission granted	29-Oct-13	3158	Morello I Galaxy House, 41 Cherry Orchard Road, Croydon CR9 6BY	290	265	15	10	Range of heights	19	£ 648	11%	Completed 2017.
Lewisham	Permission granted	18-Oct-17	3775	Lewisham Retail Park	536	440	66	30	Range of heights	24	£ 703	20%	Applicant is L&G, BLVagreed was £22m, £276 psf construction costs
Croydon	Stage 2	application validated on 16 October 2017	1683c	Morello II, Croydon	445	338	19	88	Two towers and lower rise 9 storey block	25	£ 700	24%	0.7 ha site
Tower Hamlets	Permission granted	24-Dec-14	3230	7 Limehabour Isle of Dogs E14	134	114	20	21	Range of heights	23	£ 850	34%	Office site. Telford Homes Scheme. Construction costs were very low at £158 psf. Not clear if BLV was agreed on basis of
Tower Hamlets	Permission granted	17-Oct-17	3926	Orchard Wharf, Isle of Dogs, Tower Hamlets	338	236	59	43	24 storey max - stepped	24	£ 805	34%	Galliard Homes Scheme GF commerical space. Site was former service station. BLV adopted was £5m acre based on
Redbridge	Stage 1 at GLA	Report being drafted, has not been considered by Mayor at stage 1 yet	2410c	226-244 High Road, Ilford	124		0	19		25	£ 555	19%	Current offer - all intermediate
OPDC	Permission granted FAST TRACK	14-Nov-17	2159d	First Central, Park Royal	807	544	84	179	27	27	£ 660	35%	FAST TRACK Fairview Homes scheme
Greenwich	Awaiting Decision by LPA - has been considered at Stage 2	application validated on 9 September 2016	2993a	Felixstowe Road, Abbey Wood, Greenwich	245	221	0	DMR 24 units	12-29	29	£ 489	12%	
Redbridge	Stage 2	application validated on 13 September 2016	3851	Harrison Gibson House, High Rd, Ilford	323					31	£ 580	13.8%	
Croydon	Permission granted but not implemented	22-May-14	3245	Taberner House	420				6 to 32 storeys	32	£ 675	15%	Not implemented
Croydon	Permission granted FAST TRACK	18-Aug-17	3245a	Taberner House/Queens Gardens	514	335	93	86	13-35 storeys	35	£ 700	35%	FAST TRACK Density has increased rather than height from 2014 scheme. Site 1.77 ha and includes park
Croydon	Permission granted	25-Oct-10	n/a	Saffron Tower, Saffron Square, Croydon	744		0	38		43	£ 600	5%	Berkeley Scheme completed 2016
Croydon	Permission granted	21-Sep-17	2229	1 Landsdown Place, Croydon	794			169	11/69	69	£ 775	20.5%	Affordable all DMR
Sales values over £1,000 psf													
Lambeth	Permission granted	13-Oct-17	2106a	36-46 Albert Embankment , Vauxhall	166		9	39	2544 hr/ha	25	£ 1,300	42%	28% - £10m commuted sum take AH to 42%
Lambeth	Permission granted	06-Sep-17	3369a	12-20 Wyvil Road, Vauxhall	278		23	35		36	£1,250	28%	21% with £10m commuted sum