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Dear Sirs,

Re: Bishopsgate Goodsyard Redevelopment – Daylight and Sunlight – GLA Review

I have been instructed by the GLA to undertake a review of the Daylight and Sunlight impacts that will be caused should the current proposals, called in for review by the GLA, proceed.

The standard process of analysis of impact has been undertaken between the developer and the Local authorities in control of the site. As is normal in such cases for a large scheme of redevelopment the local authority has taken advice on this subject from an external specialist consultant.

That consultant, Delva Patman Redler (DPR), has been provided with the full technical analysis of the consultant to the developer, Gordon Ingram Associates (GIA). They have then reported to the local authority giving their professional view as to the level of the various impacts around the site.

The DPR report highlighted a number of properties that, in their view, would be impacted to a greater degree than is normally acceptable.

In response GIA produced a report on these individual properties titled Bishopsgate Goodsyard, Daylight and Sunlight ref 2971 dated 14/12/2015.

It is that report and any back up analysis that the GLA have asked me to advise them on.

Standard BRE Principles

The analysis of Daylight and Sunlight Impact is usually carried out by using the methodology in the Building Research Establishment Document "Site Layout Planning for Sunlight and Daylight, A guide to good Practice."

This is very much the industry standard methodology although many types of Council have now removed reference to this from their development plans. There is however no other accredited method of checking the impact on neighbouring buildings to a development.

In this case GIA have rightly used the BRE guide to test the Daylight and Sunlight to surrounding buildings.

In its basic form the BRE guide uses a relatively simple method to assess impact. The existing level of Daylight or Sunlight is assessed at the relevant window and expressed in percentage terms of wither available sky visibility for Daylight or available sun hours for sunlight.

The Daylight also carries with it a test for the depth of penetration within any room of visible sky. The test of available sky at the window is called "Vertical Sky Component (VSC)" and the penetration within the room The No-Sky Line (NSL).

If in any circumstance the proposals would reduce either of the above percentages by more than 20% of the existing values then the BRE guide tells us that this would be a "noticeable" change.

If therefore a development needs to show that there is no impact on amenity, which is in effect what most Local Authorities seek, then there should be no loss beyond this 20% level.

The BRE guide recognises that in certain locations, inner cities etc, that this is not always possible and that potentially one might be able to set one's own guide levels. It appreciates the need for flexibility as if in every single case the loss of daylight was restricted to less than 20% then this would cause a restriction on development that may be disproportionate to the actual loss of light. For example one kitchen window may prevent hundreds of flats being constructed.

Many local authorities, in my experience, do allow flexibility and quite rightly set the loss of amenity into the planning balance with all the benefits, to the public, of the scheme.

In such circumstances Consultants in the field have to show that despite the losses that are in excess of the 20% guide the level of retained light is still sufficient for use and habitation. It is a matter of some debate as to what level of daylight is actually acceptable and indeed expected. The level of expectation will undoubtedly change with location, a City Centre use expecting a far lower level of Daylight than a Suburban or rural setting.

GIA Analysis

Given the backdrop of the above and that the original analysis showed many transgressions of the 20% test, GIA have sought to set their own level of acceptability for the local area to the Goodsyard.

To the North of the site is the extensive residential Boundary Estate and GIA have analysed this to see what levels of Daylight are currently received in this urban environment.

These calculated out to be between 17% VSC and 25 % VSC from ground to Second floor levels. In addition they use an example of a central London location where consent has been granted and where retained levels of Daylight are at 11%.

They use these to suggest that a VSC value of 15%-18% might be the expectation for habitation in an area such as Shoreditch on the City fringe.

I have no objection to this type of analysis and it has become a method often used to check the level of impact or acceptability of large schemes which may unavoidably create daylighting issues.

On that basis I would accept that a target value for neighbouring residential use in such a location and with the desired level of redevelopment might be between 15% VSC and 18% VSC.

I have therefore looked at the levels of compliance with these criteria across those properties highlighted by DPR as being significantly impacted.

GVASB Analysis

GIA have set out in their document an analysis of the individual properties questioned by DPR and explained the level of impacts and a reasoning as to why the levels of impact should be seen as acceptable.

I have taken these and also checked the actual levels of daylight to see what the residual levels of daylight are like compared to the GIA assessed local level. In doing so, I have recorded the number of windows per property that will be below the 15% level. I have discounted those windows that by dint of their existing design currently receive a low level of VSC, these will record a high percentage reduction whatever the scale of development proposed and clearly could not be said to enjoy any usable level of amenity in the existing condition.

119 Brick Lane

This building has 12 windows; from these 6 will have less than 15% VSC ranging from 9% up to 14%.

97-105 Brick Lane

51 windows are within this building which is located at the far East end of the site and not directly opposite the development.

There are two windows that see a large reduction and will be below 15% VSC retaining at 6% and 5% respectively.

78 Quaker Street

Of 14 windows 6 will be reduced to less than 15%, the values ranging from 11%VSC to 14% VSC.

3 Club Row

With 12 windows located in this building there will be 10 that will be left at less than 15%, although some windows are already below 15% the reductions are significant with retained levels between 2.6% and 11%.

1-48 Wheeler House West

This is an extensive balcony access block South of the scheme and at 90 degrees to it.

It has 51 tested windows and out of these 40 will have light left at less than 15%. The retained levels are from 3% VSC up to 11%VSC.

Some 8 of the 40 actually see a small reduction however that leaves 32 windows that see a significant reduction and will be left at less than 15% VSC.

1-48 Wheeler House (Main Block)

This is the main block attached to the above building and thus parallel to the scheme.

It has 190 windows tested. Out of these 142 will be left with less than 15% VSC but it would be fair to comment that many of the values are already low and the retained level of light will not be significantly different from that existing. However there are 71 windows that move from a reasonable level of light to single figures, the retained levels here will range from 3% VSC-13% VSC.

25 Wheeler Street

This building is located some distance to the South with 87 tested windows, of these 21 will retain less than 15% VSC. It is argued by GIA that the distance from the site means that despite the reductions in light, which in some cases are significant, and the low levels of the retained light there will not be disproportionate impact. I cannot agree with that statement, it is true some of the existing values are low but in some instances the level of light is reduced to zero or near zero, that cannot be acceptable as an impact.

10 Quaker Street

Again, south of the scheme a property with 29 windows 17 of which will fall below 15%VSC. 9 of these move from well over 30% VSC to under 15% and indeed 2 of them from 29% to 5% VSC.

167 Commercial Street

This is a small building over a ground floor commercial unit to the west of the site. All 13 windows fall from over 30% VSC to less than 15%.

195 Shoreditch High Street

Located diagonally North West of the site on the main road junction this building again has units over ground floor commercial.

This building sees 4 of its 10 windows fall from high levels of daylight to less than 15%.

194 Shoreditch High Street

Located diagonally North West of the site on the main road junction this building again has units over ground floor commercial. This building sees 5 of its 10 windows fall from high levels of daylight to less than 15%.

Tea Building 65-66 Bethnal Green Road

This is a non-residential use, these are not usually incorporated into Daylight analysis unless the local authority specifically requests. I have assumed the GLA would not wish to consider this building an issue although clearly there will be impacts on light.

13 Bethnal Green Road

This is a non-residential use, these are not usually incorporated into Daylight analysis unless the local authority specifically requests. I have assumed the GLA would not wish to consider this building an issue although clearly there will be impacts on light.

30 Redchurch Street

This is a small property whose rear elevation is located to the north and separated by an intermediate block of property. The two windows here will retain in excess of 15% VSC and under the suggested criteria be acceptable.

32 Redchurch Street

This is a small property whose rear elevation is located to the north and separated by an intermediate block of property. The two windows here will retain in excess of 17% VSC and under the suggested criteria be acceptable.

17 Bethnal Green Road

This is another small property to the North of the site but it is directly opposite the North Elevation.

Its 5 windows all see a reduction to less than 15% VSC from levels over 30% VSC.

70 Redchurch Street

Again to the North and separated by other property blocks this has 21 windows 18 of which will be left at less than 15 % VSC. 9 of these reduce significantly and are left with levels of VSC between 8% and 14 % VSC.

Telford Homes Block A

This is a large recent redevelopment to the North side of the scheme plot.

It has a large number of units within it and consequently 788 windows were analysed, out of these 403 will see retained levels at less than 15 % VSC. In this case there are many Living/Dining rooms that see this impact where levels are being taken down from 23% to around 13%.

In this block GIA have also, as allowed in the BRE guidance, run a set of assessments that ignore the balcony projections to the flats that often cause a greater than normal reduction in light. If in such circumstances the results then achieve compliance it can be stated that it is the inherent design of the balcony that is causing the issue.

In this case the GIA testing shows that half the windows would still be reduced to below 15% VSC and thus the level of impact must be due to the scheme's mass.

63 Redchurch Street

Located three property blocks to the north of the site this building does not currently appear to be in residential, use.

1-16 Sheba Place

Although located directly to the South of the scheme the windows facing the site are kitchens and not thought to be other than food preparation rooms. On that basis we would normally find the impacts acceptable.

1-40 Eagle House

This block is also south of and parallel to the site and contains 191 windows that face the site.

From these 24 will retain less than 15% VSC with the majority around 13 % VSC.

23-24 Wheeler Street

Separated by one property block to the south of the site 8 of the 18 windows are reduced to less than 15% VSC. It could be argued that the impacts here are acceptable as only two windows see a greater than 20% reduction. Based on the 15% criteria however there is a reasonably high impact.

154 Commercial Street

This building is immediately to the South of the scheme at its western end. Only 16 achieve a compliance in reduction terms and when assessing against the 15 % VSC criteria 40 of the 63 windows do not retain that level. It is argued that many are bedrooms; our additions show 20 that are in fact lounge areas.

19-29 Redchurch Street

Located almost 100m to the north of the site the building has 23 windows of which 11 will be left with less than 15%VSC. In the case of this building there are reductions from 10% and 8% to 0.84%VSC to 0.56% VSC for example.

15 Bethnal Green Road

Given the layouts of the floors for this building there is no issue.

25 Bethnal Green Road

This building does not appear to be in residential, use.

28-30 Bethnal Green Road

Located on the prominent corner between Bethnal Green Road and Sclater Street the building sits immediately to the North of the scheme. Its 42 windows see large reductions and 23 are left at less than 15% VSC. Many existing levels are high but these reduce to 6-10% VSC.

14 Chance Street

This property has only 4 windows facing the site and the design is such that the windows are set deep within recessed balconies. Existing light levels are so low I do not feel they constitute usable amenity, any reduction will not change the ability to use these rooms.

Sunlight

The actual sunlight availability figures are not referred to in the document and the whole subject is concluded in one paragraph. Justification for what will be significant impacts on neighbour's sunlight are based on there being a significantly high abnormal availability across the site in the existing condition and that therefore large reductions will be inevitable. Also that winter sun, being so low, will be lost in any reasonably big development of the site.

Overshadowing

This analysis applies to any neighbouring open amenity space that has the expectation of sunlight. Only two are analysed in this document, Shoreditch House swimming Pool and the internal Courtyard to Telford Homes development.

In terms of the pool the test is failed in that at least 50 % of the area should get 2 hrs sun on March 21st. The mitigation offered is that the pool will be well sunlit in summer, this is true but it will be a colder less inviting place outside the summer months.

In terms of Telford Home's space there is little sunlight in the existing condition, it was clearly not an overriding issue at design stage and any reductions will make no meaningful difference to its use.

Initial Summary

On the basis of the criteria suggested by GIA out of the 1643 windows that were the subject of the DPR concern 808 fail to retain the 15% level.

Subsequent to reporting this to the GLA I met with GIA who went through each property where a major impact had been noted to explain to me their reasoning as to why the impacts may be acceptable.

It was clear from this meeting that a number of properties had been included in the analysis that had been found to be commercial in use and therefore should not be part of the analysis.

I advised GIA that it would be beneficial to produce a further document which rectified this and summarised their reasoning on the acceptability of the impacts for each property.

This was supplied and I undertook a review of that document which was in letter format dated 18th February and titled "Bishopsgate Goodsyards - Daylighting Impacts Summary Note".

The note sought to justify the impacts on the various affected buildings, however, it was considered that the explanation for the impacts as a whole were not consistent and sought to use differing justifications in each circumstance.

Following a meeting with the GLA I advised the GLA request a report on each property which considered each building under a set of specific parameters such that it would be possible to reach a conclusion on the total number of rooms impacted around the scheme that did not meet any of those criteria and hence give a means to quantify the total number of neighbours truly impacted.

The revised analysis was provided and titled "Flow Chart Report - 8/3/2016".

The parameters I asked for were:-

1. Building by building list the number of habitable rooms tested and how many of these see a more than 20% reduction in VSC
2. Building by building then list the total number of rooms that will remain above 15% VSC
3. Building by building where rooms are left below 15% how many would pass the ADF test and be left with a daylight distribution contour of over 70% of room area.
4. If there are ADF levels already below standard then how many rooms fall into that category and how many see a more than 20% reduction.

The reasoning for the above is that, as explained earlier in the report, the headline test for impact is to check the percentage reduction in available sky. If this is more than 20% of existing there will be a noticeable change for the occupant.

Having accepted the Urban nature of the site and that there will inevitably be higher reductions in light the second test asks do the impacted rooms retain 15% VSC which can be agreed as a reasonable level of daylight for this locality?.

The third test relates to the Average Daylight Factor (ADF). This is a test set up by British Standards and seeks to test the average light throughout a room and this gives minimum criteria for habitation. The test uses the room surface areas, the glazed area and internal and external reflectivity to achieve the analysis. In conjunction with this the Standard asks that as well as passing the minimum ADF that a sufficient proportion of the room should be directly lit from the sky, the No- sky line (NSL) test.

Both these tests should be passed to have satisfactory living conditions.

The final analysis suggested looks at percentage reductions in ADF, there is no prescribed test as such, however, it has been argued that if a percentage reduction is allowable within the VSC criteria then the same should apply to the ADF criteria. In my view this is not a sound analysis, the ADF is an absolute test and not a comparative one. However there are circumstances where the ADF is, in the existing condition, below the minimum criteria and it can be useful to look at the change. GIA however have not used that fourth test.

I have analysed the "Flow Chart" report and concluded, on the basis of the criteria that the following impacts would fall below all the criteria.

1. 63 Redchurch St - 2 fail and have very low levels of light.
2. 196 Shoreditch High Street – all retain above 15%.
3. 194-195 Shoreditch High Street - All pass.
4. 30 Redchurch Street - Assumed top floor only is residential, if correct all pass.
5. 10 Quaker Street - 6 rooms fail.
6. 23-24 Wheler Street – 3 fail with very low ADF levels.
7. 1-48 Wheler House - 67 rooms fail. (No precise information on actual Habitable room numbers.)
8. 14 Chance Street – 2 fail (note here these are hugely recessed windows and existing light levels are very low , impact not noticeable).
9. 97- 105 Brick Lane – 10-15 rooms impacted (no precise room use information , therefore not possible to be precise about ADF failure).
10. 25 Wheler Street – 12 rooms fail, residual impacts very high.
11. 19 -29 Redchurch Street – 8 rooms impacted, these have very high percentage loss.
12. 17 Bethnal Green Road – 4 out of its 5 rooms are impacted.
13. 70 Redchurch Street – 12 rooms fail.
14. 119 Brick Lane – 3 rooms are failing here, the impacts are extremely high.
15. 1-42 Eagle House – 16 rooms are impacted.
16. 28 – 30 Bethnal Green Road – 6 rooms impacted.
17. 3 Club Row – 4 rooms.
18. 1-16 Sheba Place – 1 room only, this is a massive impact.
19. 154 Commercial Road - 22 rooms, very sever with losses up to 88% of existing levels.
20. Telford Homes – 213 of 413 rooms fail.

There are 20 properties listed here as GIA have said that the other 6 properties listed in the scheduled on page 8 of the document are commercial. I have not had the opportunity to check that point, it would require a further site inspection.

In summery then of 914 rooms tested I find 412 do not achieve a 15% residual VSC level and cannot be justified as being well lit in terms of the ADF criteria.

Mitigation

GIA seek to justify these impacts in a number of ways, I have listed below and my views on them.

1. Existing tight building configuration. – This undoubtedly leads to difficult scenarios when developing sites as some buildings have limited views to the sky and the closing of small gaps in the view can lead to high impacts.

I don't believe this is a reason to simply leave an existing neighbour badly lit, the circumstances are what they are and one has to cope with that in design. In some circumstances if development is a planning requirement on a specific site then impact may be unavoidable.

2. The site is current open - again this is normally a good justification as it will be inevitable that high impacts will be felt as the baseline level of daylight is extremely high. This has in my view been dealt with by reducing to a certain point the target for VSC and indeed by allowing ADF /NSL criteria to become a target too.
3. Fusion Scheme example – GIA have sent a copy of the Daylight studies for this scheme adjacent to the rear of the Telford Site. Impacts have been allowed that would not have passed the criteria that we have been using for BGY and GIA seek to show that is a reason why a number of neighbours can be allowed to fall below those criteria. It is a reasonable point to bring up, however, my view would be the weight of numbers in each case is very different. Effectively the Fusion Scheme, being low rise on an old car park site, actually impacted few neighbours and it would have been unlikely to have been possible to develop that site at all if more stringent criteria were imposed. That is not the case on the BGY site. Different design would alter the number of impacts accepting that this will lead to a reduction in unit numbers on the BGY site.
4. Telford Homes- It is true to say that a large number of the seriously impacted rooms are located in the Telford Homes Scheme on Bethnal Green Road. Evidence was sent to show that a pre-existing agreement had been reached between the developer and those of the Goodyard as such that there would be no objection in light terms. The document is clearly a common law light agreement and has no impact on planning .It would not be possible, in my understanding, for a freeholder to contract out any leaseholder/tenant from objecting at planning.

The Telford Homes design is typical of modern urban design with balconies utilised as amenity space. These do limit light availability and it can be argued that there is a trade between light and amenity and that the balconies are the reason for the light issue rather than the neighbouring development. This is true to an extent however my view is that one should still consider what will be the residual levels of daylight for the occupant, the balcony will not be removed and they will have to live in the consequent conditions.

5. IPG – The Interim Planning Guidance was indicative and did not have any Daylight or Sunlight analysis with it. It clearly states that any scheme should comply with these guidelines. It is clear to me that an attempt to reduce the level of impacts to neighbours would not allow the version of the IPG massing shown in the GIA documentation to be built. There would be a significant reduction in unit numbers and or loss of amenity space. The GLA will have its own view on the weight of the IPG itself and the massing view drawn. My view is that if a Daylight analysis had been undertaken at the time of the IPG then the massing suggested with the IPG would not be as shown in the GIA analysis.

GIA Subsequent Analysis March 2016

Subsequent to all the above I have been provided with and updated report which tries to address the issue of parts of the application being in outline only and therefore having maximum and minimum parameters. Clearly these would have different levels of impact for the surrounding buildings and it would be necessary to understand the differences in that level of impact. The figures above are based on the results for the maximum parameters.

It has not been possible for GIA to supply me with all the figures for the minimum parameters for the whole site but only an interpretation using impact testing on the Telford Homes building. I do not have the tabulated figures for any of the neighbouring properties in that scenario. Page 49 of the report gives 3-d model views of 3 scenarios and GIA's view of the varying reductions in impacted rooms within the Telford Scheme if blocks on the proposed site were reduced to minimum parameters or if Block D of the scheme is completely removed.

GIA suggest that if the minimum parameter scheme is built then the residual impact would be 21 rooms in the Telford building that would fail the tests we have outlined in the earlier parts of this report. This figure is based on an assumption that one can count a "pass" if a room passes only one of the ADF or No sky line tests. In practice a room will be sufficiently lit if it passes both tests and therefore on that basis the impacted rooms with Telford Homes would be 32.

One then has to add back in the other impacts around the site which do not necessarily change with the reductions in mass shown.

That would I estimated be 181 rooms impacted that do not sit in the Telford Homes scheme, if one then adds in the impacts to that building the number of impacts in total to the surrounding buildings would be 202 on GIA's basis and 223 if not.

It is not clear if, as in discussions, GIA have sought to argue that the level of impacts can further be reduced by rounding figures up to achieve the 15% target where the precise percentage calculated is within a few decimal points of the target on the basis that the difference would not be noticeable. I do not disagree that the difference may not be noticeable but it should be remembered that the context of the analysis is that the target is already a lesser benchmark than the headline BRE tests. Rounding up will reduce the number of impacted rooms.

The removal of the whole of Block D suggest 38 room that fail all the tests and thus in that scenario there would be 219 units around the site impacted.

These are both clearly improvements on the previous level of impact for the maximum parameter scheme which I had calculated as 412. GIA have some issue with that number and believe I should be calculating that at 355. It may be that the discrepancy is because more rooms have been found to be commercial in use but given the timescales from receipt of the latest report to completion of the planning report it has not been possible for me to check every figure.

In any event in the best scenario there would be 219 properties (I have counted the neighbouring buildings as flats) which is a high number of impacts and which will need to be set in the planning balance with all other aspects of the scheme.

Conclusion

Depending on the variation of scheme assessed there are clearly still a high number of rooms impacted and it should be remembered that these are virtually all flats and thus each room will mean one occupant impacted .

The assessment has been made on new lower target criteria than the BRE headline guidance and the number of failures should be seen in that context.

Whilst huge efforts have been made to show a reduced level of impacts this has been based on very simple alterations to the proposed blocks, I am of the view that setting aside other parameters that have driven the scheme to be massed in the locations it is currently showing it would be possible to alter the block layouts to give a reduced level of impacts all round to the neighbourhood. This may necessarily alter things such as the Park provision and other elements but from a daylighting perspective would I believe be achievable.

I think it remains my view that given the above this is still a very high number of residual impacts to consider although of course you will as ever weigh the balance of these against the benefits of the scheme and in the normal planning context.

I trust that is helpful.

Yours sincerely



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