

In Chief evidence – by Ian Dias - Background to BRE and tests, focus on my Proof of Evidence, Transient Shadow Plots discussed and comments on Mr Lane’s PoE (as no rebuttals issued by respective parties)

20.11.20

I shall begin with **Reason for Refusal No 6** which is effectively, splits into two parts, namely;

- unacceptable harm to the daylight of a number of neighbouring properties and secondly,
- unacceptable harm to sunlight to a number of neighbouring amenity areas / rear gardens.

Considering first unacceptable harm to daylight to a number of neighbouring properties, I need to provide a brief context background first;

- As standard, in terms of daylight, both Vertical Sky Component (VSC) and daylight distribution has been analysed and presented within the appellants daylight and sunlight report.
- Both tests are of equal importance and consideration towards provision of daylight within a neighbouring habitable room.
- The methodology for such review is set-out within BRE Guide – Site Layout Planning for Daylight and Sunlight (I will refer to this as the BRE Guide) which considers impacts from development and allows for reductions to neighbouring daylight and sunlight with set default target criteria.
- In the interests of time, I’m not going to go through detailed technical definitions but VSC can be considered as;
 - effectively a measure of the availability of daylight in this instance direct skylight
 - it’s measured at the centre of the window (although in line with the external face of the façade)
 - For a Vertical window in a flat plane, the max VSC is just under 40
 - In terms of the BRE Guide default target criteria, , we are comparing the shift change from existing VSC and then with the proposal in place, if the proposed VSC is BOTH less than a VSC values of 27 AND less than 0.8 times its former value, then occupants will ordinarily notice the reduction in skylight.
 - Thus in summary, if existing values are just above or already below a VSC value of 27, then the default target is not to go below 0.8 times the former value i.e. not to exceed a 20% reduction.

- I consider VSC is a good measure for registering obstruction from development (although care and judgement needed with interpretation).

In terms of the **daylight distribution** tests, this considers the contour within the room, which is placed on a flat working plane and for residential, measure at 85cm above floor level. The contour, divides the room into 'able' and 'not able' to see / receive direct sky – the contour is called the no-sky line and is a tipping point – in front of the contour you can see sky and behind the line you cannot see sky. The area of the room that can see direct sky is expressed as a percentage – thus if everywhere within the room at working plane can see sky, we would describe room as having 100% daylight distribution.

Daylight distribution provides an indication of the distribution of daylight within the room – areas behind the no-skyline will appear more gloomy.

The BRE Guide default target criteria is not to go below 0.8 times the former value i.e. not to exceed a 20% reduction.

In reference to the BRE Guide, some flexibility and judgement is often needed as the default target criteria does need some consideration as to whether in rural, sub-urban or urban settings – the BRE Guide does highlight some flexibility can be engaged as applicable and values given should not be considered mandatory.

Application of the BRE Guide within London often leads to some impacts not meeting BRE Guide default target criteria – resulting from increased density and so forth. The BRE Guide does give consideration to 'Alternative Target' criteria (within Appendix F).

From the appellants daylight analysis, the main departure in reductions exceeding BRE Guide default target criteria primarily relates to daylight VSC (although some isolated instances of daylight distribution also not meeting default target criteria).

In considering such departure for daylight VSC / reductions to the 827 neighbouring windows analysed for VSC can be summarised as :-

585 windows meeting default target (71%)

242 windows **NOT** meeting default target (29%)

However, I do not consider it appropriate to simply apply BRE Guide default target criteria for this site in terms of consideration of daylight VSC. I have sought a balanced and flexible approach in considering an 'alternative benchmark' for daylight VSC, with reference to such factors as;

- There is minimal massing presently on site (2 storey) and for more meaningful massing / redevelopment on site, is likely to give rise to some impacts / reductions (within reason)

exceeding BRE Guide default target. There are typically high levels of existing VSCs for many neighbouring windows facing site.

- In reference to inner London sites generally – some recent appeal cases have also provided some focus on retained values (although reduction is still relevant) and in some instances, retained VSC value of mid-teens (i.e. VSC of 15-17%) for some sites within an inner London opportunity areas may be for acceptable for some neighbouring properties.
- **However**, whilst I recognise such points, I do consider the area displays some **suburban characteristics** - low rise – typically 2-3 storey (with Bellway site up to 4-5 storey), 69 No gardens having been analysed for sunlight surrounding the site and as noted, does not form part of the E&C regeneration area.

Accordingly, I have first sought to consider, what current VSC values are within the area (as the Major of London Housing SPG makes reference to when considering degree of harm, by considering existing baseline VSCs established from typologies within the area and of similar nature across London).

Whilst both Mr Lane (the appellants daylight and sunlight consultant) and myself have respectively considered this aspect of existing VSCs from typologies in the area I do need to state my concern and disagreement on the manner adopted by Mr Lane in his samples considered.

Refer Appendix A of my proof (CD9/4) – Table 1 and Location plan of 6 sample areas

I have chosen properties of differing typology around the site and for which existing VSC values are known (from the appellants daylight analysis) but then **importantly**, I have chosen windows that do not have a direct clear view of site (as that may distort matters given the fairly limited existing massing on the site), **instead** I have focused on streets with existing buildings facing each other i.e. established arrangement and typologies within the streets surrounding the site.

I have sampled continuous across the facades for the extent of the red line marked on the elevations for;

Area 1 – Taken existing VSCs properties along Renfrew Road which face the 3 storey terrace, of 18-41 Renfrew Road

Area 2 – Taken along Brook Drive faces 2 storey & 3 storey properties opposite

Area 3 – Castlebrook Close – cul de sac setting – viewing 2 storey

Area 4 – Across Dante Road viewing Nos 7 – 31 (2 storey)

Area 5 – Rear of 7-31 Dante Road viewing Bellway Development – 3 storey Freeman House (and 2 storey plus pitched roof accommodation to Bolton House and with the water tower behind

Area 6 – Bellway site - Bolton House but some skewing as some windows facing site

The VSC summary for this review is presented in Table 1 – existing VSC results for these differing typologies within the streets area are typically around a VSC of just below 30 for ground floor and just above 30 for 1st floor – these area good VSCs and similar to what I would anticipate in an ‘sub-urban’ setting). An inner London / regeneration area of targeting retained values at ‘mid-teens’ would clearly be inappropriate in this instance.

I highlight that for some neighbouring windows with a clear view over site (such windows not considered within my typology review) we are seeing some even higher VSCs again e.g. Rear of northern end of 18-41 Renfrew Road towards VSCs of mid-thirties

Applying a flexible and duly considered review, for the site and background, I have sought to place harm I have less concern about as being:-

All reductions which exceeding 20% (i.e. default target criteria) for up to 29.9% (minor adverse)

For all further reductions beyond (30% to 39.9% - moderate adverse) AND major adverse reductions 40% or greater but ALL on the **proviso** that the retained level of VSC is not less 20 (minor adversity excluded) and representing a significant departure to my circa 30 VSC from a pure typology review (in also balancing suburban characteristics with an inner London site).

In terms of VSC review, that would leave circa 71 windows (9% of all windows analysed) as harm that does give reason for concern i.e. unacceptable harm

At this point, I do need to refer to Mr Lane’s proof, as I must highlight two keys aspects in particular which I disagree with Mr Lane’s typology review.

Refer **CD9/13** (includes 14 appendices each loaded separately) – N. Lane – Proof of Evidence **Table 4.1 page 30**

Mr Lane presents his VSC typology review in Table 4.1 page 30 – this table provides a VSC average of mid-teens from his review and Mr Lane has then run with the stance of inner London ‘mid-teens’ as an appropriate alternative target for this site. I clearly disagree with this as being equitable. What is at odds is the typology sample points selected

Refer **CD9/13** (includes 14 appendices each loaded separately) – N. Lane – Proof of Evidence – **appendix 5**

Mr Lane has sampled various positions (17 No in his instance) for consideration of typologies in the area for VSCs

Within Appendix 5 the location of these various areas are shown - issue with these localities in that if we consider the AREA REF PLAN:-

1. 5 No sample points are in the E&C Opportunity Area - F, C, J & I - one is facing the UNCLE development – much greater density. Whilst other samples points in the E&C Opportunity

Area relate to more established streets, Mr Lane has sought taller buildings / not your typical 2-3 storeys around site.

2. 8 No sample points relate to new build developments – given such new builds will typically be taller and denser development this is not a fair consideration on the established streets around site – equally, for new build development it is common to have larger windows to compensate lower VSCs – such VSCs should then not be sought to be applied to the 2-3 storey traditional housing around site – these new build sites relate to :-
 - 2 No sample points where taken within Area E relating to the recent new build fronting Kennington Lane (off Holy Oak Road) – (5/6 storey)
 - 6 No areas relate to area H&G for the modern Bellway site
3. Remaining 4 No areas if we look at the SECTION REFERENCE PLAN, whilst these are not new-build they are considered in all instances to relate to generation of ‘worst VSC selection’ – I highlight:-
 - D – facing Gilmour House – 6 storeys
 - B2 – facing Dryden Court – 5 storeys
 - B3 – within the enclosed / bottom of the U shape to Heralds Place – enclosed 2 sides
 - M – Reedworth St – facing 5 floors

Mr Lane has not considered any of the streets / properties considered for site analysis other than the Bellway site for the properties typically 2-3 storey – this is strange as he already has the analysis for this and indeed what I have utilised.

It would appear Mr Lane has gone to some length to select VSCs that would inherently provide much lower VSC results than for those properties around site – he has chosen to ignore the 2-3 storey streets around site which he already has analysis on.

The second point that I disagree with within Mr Lanes proof is that even with Mr Lane’s alternative target of mid-teens, where reductions still exceed this alternative, in many instances, he then seeks to apply a theoretical analysis of removing the ‘no eaves / no soffits analysis’ . Whilst this is a theoretical consideration stemming from the BRE Guide for consideration on inherent sensitivity of ‘self-limiting’ of daylight it has been applied totally inappropriately in this instance – the consideration in reference to BRE Guide default target criteria is to assist on balancing inherent self-limiting as to whether an adverse proposed massing by undertaking with and without soffit analysis – the test should not be utilised when working to alternative baseline as would then represent the level seeking to at least retain – not to go further below this baseline by theoretical scenario analysis.

In conclusion, whilst Mr Lane and myself have followed similar methodology in terms of seeking existing VSCs from typology within the area, we are disagreeing on properties / sample points to determine this. I further disagree on the approach taken by Mr Lane to then seek to apply a theoretical ‘no eaves’ analysis when going below that value to seek to justify further adversity.

Second part of Reason for Refusal No 6 in that unacceptable harm to sunlight to a number of neighbouring amenity areas / rear gardens.

Refer Appendix C of my proof (CD9/4) – you should see gardens with 2 hour test on 21st March

P,27– proposed scenario – gardens with reductions not meeting BRE Guide are outlined in red. In terms of analysis data, I have a summary Table 3 on page 15 of my report

1. In this instance, consideration of sunlight reduction / increased shadowing has been considered to neighbouring amenity areas relate rear gardens applicable for review.
2. 69 No amenity areas have been reviewed – 13 No amenity areas have reductions exceeding BRE Guide target criteria. From these 13 No amenity areas, the BRE Guide would class 8 No of these amenity areas (as existing) as adequately sunlit throughout the year (**those with at least half the amenity area having the ability to receive at least 2 hours of sunlight on 21st March / equinox**).
3. 8 No gardens are currently adequately sun-lit throughout the year
 - Due to the impact of the proposal, 8 No areas would not only no longer be classed as ‘adequately sunlit throughout the year’ but would also have significant reductions far exceeding the BRE Guide target criteria – I have classed the reductions to these 8 No gardens as **4 No ‘major adverse’** and **4 No ‘moderate adverse’**

Major

2 Castlebrook Close : E 52.8 to P 27.0 – **49% reduction**

4 Castlebrook Close : E 69.1 to P 11.5 - **83% reduction** (heard Ms Hennessy)

136A Brook Drive : E 74.5 to P 33 - **56% reduction**

138 Brook Drive : E 70.1 to P 28.3 - **60% reduction** (heard Ms Lockheart)

Moderate

130A Brook Drive : E 67.8 to 41.6 – **39% reduction**

144 Brook Drive : E 54.6 to 34.5 - **37% reduction**

132 Brook Drive : E 60.6 to 38.5 – **37% reduction**

7 Dante Road : E 71.9 to 45.1 – 37% reduction (front garden / potentially less relevant)

- These are significant reductions / impacts to existing adequately sunlit gardens throughout the year which would no longer be the case with significant losses being noticeable.
4. For the remaining 5 No amenity areas (out of the 13 No), whilst these, as existing, are not be classed as adequately sunlit throughout the year they would experience a greater than a 20% loss which is noticeable. These relate to

Major

3 Castlebrook Close : E 39.9 to P 19.3 – **52% reduction**

7 George Mathers Road : E 19.0 to P 1.8 – **90% reduction** (heard Mr Milson)

8 George Mathers Road : E 19.6 to P 0.0 – **100% reduction**

Moderate

144 Brook Drive (second area) : E 48.6 to 33.4 – **31% reduction**

- I have excluded 1 Castlebrook Close (the 5th of these 5 gardens) on two counts;
 - a) as existing of just 1.7% of the garden can receive 2 hours of sun at the equinox – no meaningful review for this particular test given such an existing low percentage
 - b) the front garden appears enclosed and utilised for amenity – an alternative source of amenity
 - So the aforementioned are again, significant reductions / impacts to gardens were losses will be noticeable.
5. The above is the ‘technical test’ albeit there are obvious limitations in such analysis e.g. as to when during the day, does loss of sunlight actually occur? Shadow plots at specific times of day and year can provide such details – we reference these as transient shadow plots and typically we take the **21st March / equinox** with snapshots, of say at 1 or 2 hourly intervals to consider the extent of shadowing / timing of sunlight loss. This has been generated by the appellant I highlight;-

Refer to Transient Shadow Plots

- existing shadowing from the site massing (green shadowing) – left image
- against shadowing from the proposal (blue shadowing) – right image
- All the grey shadowing is existing shadowing quite separate site
- Shadow plot sequences have been provided for 21st March – standard consideration / average for the year. 21st June also provided which shadows are shorter (sun higher in the sky). No shadow plots provided for 21st Dec (converse is true).

- **I have added 3 points** to Note : A Castlebrook Close & Brook Drive triangular garden cluster, B – 144 Brooks Drive (2 amenity areas) & C 7&8 Bolton House to ease identification

Transient shadow plots - 21st March (equinox), hourly intervals 7am – 6pm GMT:-

- Additional shadowing from scheme (**note - some existing context shadowing**):-
Group A – 10am – 3pm (individual gardens entering and existing at different times)
Group B – 1pm – 5pm (then too much context shadowing)
Group C - 1pm – 5pm (then too much context shadowing)

Transient shadow plots - 21st June (mid-summer), hourly intervals 6am – 9pm BST

- Additional shadowing from scheme (**note - some existing context shadowing**):-
Group A – 11am – 3pm individual gardens entering and existing at different times)
Group B – before 2pm – 4pm
Group C – before 2pm – 7pm (then too much context shadowing)

Thus some additional significant shadowing occurs from the scheme, broadly - 21st March;

Group / position A properties – broadly 10am – 3pm. (individual gardens entering and existing at different times). **Group / position B & C** - 1pm – 5pm

6. Mr Lane has sought to ‘mitigate’ / re-present the 2 hour test analysis on altering the assessment date / considering how close to the 21st March benchmark date that reductions would then meet BRE Guide – for the 8 gardens having been originally adequately sunlit, days provided range 6 to 25 days (average is 13 days). Not considered an appropriate test. Trees are ordinary ignored in neighbouring review and dappled shade is sometimes welcomed – I note Mr Lane provided some amenity photos with trees in full leave leaf
7. In conclusion UNACCEPTABLE HARM TO 11 PROPERTIES (excluding 1 Castlebrook Close and 7 Dante Road). I consider this in terms of the extent of reductions (2 hour BRE test is quite generous) and consideration of the transient shadow plots supporting this concern on harm.

As a final comment on neighbouring review, some properties are in an unfortunate position of having unacceptable harm to both daylight and sunlight to amenity e.g. 144 Brook Drive, 136, 136A and 138 Brook Drive

Reason for Refusal No 7 which relates to inadequate daylight provision within Block A.

Refer you to Appendix D of my proof (CD9/4) – Table 4

Read – Proof page 18-19

Read – p-18 -19

Highlighted – 3 areas that Inspector may wish to visit:-

- Holly Oak Road new build – stepping down towards backland
- George Mathers Road – view towards water tower (massing context of Bolton & Freeman House)
- Side road adjacent – rear of No 144 Brook Drive – current trees minimal (no leaf)