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Mr R Tulloch
Senior Planning Officer
London Borough of Camden, Regeneration and Planning
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By email only: Rob.Tulloch@camden.gov.uk

Dear Mr Tulloch,

Re: 2016/2457/P – 1-3 and 4-8 Ferdinand Place, London NW1
Independent review of daylight and sunlight assessment

In accordance with your instructions, we have carried out an independent review of the daylight and sunlight report dated April 2016 and revised daylight and sunlight results dated 23 November 2016 (prepared following removal of the fourth floor from site B) prepared by the Applicant's consultant, GVA, ("the assessment" and "the revised assessment") submitted in support of the planning application for the proposed development at 1-3 and 4-8 Ferdinand Place, London NW1. We have been asked to review the assessment and advise on the suitability of its scope, method of assessment, criteria used, results produced and conclusions reached by the consultant. This is to assist the Council in understanding the potential effects of the proposed development on the surrounding properties and the adequacy of light within the proposed new dwellings, having regard to planning policy and published guidelines. We have also reviewed the various objections submitted by or on behalf of the potentially-affected neighbouring properties as well as GVA's response letter dated 4 August 2016.

This review does not extend to a detailed technical analysis of our own, nor have we checked the consultant's 3D computer model or calculations. We have assumed that the assessment is accurate and simply report on the results and conclusions; although, if we feel there is reason to seek confirmation on matters affecting accuracy we have stated so below.

1. Planning policy and guidance

It is understood that London Borough of Camden's planning policy seeks to reasonably safeguard daylight and sunlight amenity to existing surrounding residential properties and provide satisfactory daylight and sunlight amenity to future occupiers of new residential development. The leading guidelines on daylight and sunlight amenity are published by the Building Research Establishment in BRE Report 209 *'Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice'* (2011). The Council's draft SPG on Amenity (November 2017) requires daylight and sunlight assessments to be undertaken in accordance with the BRE guidance. It notes that levels of reported daylight and sunlight will be considered flexibly taking into account site-specific circumstances and context.

The Mayor of London's 'Housing Supplementary Planning Guidance' (March 2016) advises that the BRE guidelines should be applied with an appropriate degree of flexibility and sensitivity to higher density housing development, especially in opportunity areas, town centres, large sites and accessible locations. It suggests that account should be taken of local circumstances, the need to optimise housing capacity and scope for the character and form of an area to change over time.

2. BRE guidelines

The BRE guidelines set out an assessment methodology and numerical guidelines for assessing the effects of development on daylight and sunlight to surrounding properties and the adequacy of daylight and sunlight within new development. The applicant's report summarises the various tests and numerical guidelines correctly, except it does cover sunlight to back gardens/amenity spaces or daylight and sunlight to new dwellings.

Effects on daylight/sunlight to neighbouring properties

In short, where some part of the proposed development will subtend an angle greater than 25° to the horizontal measured from the level of the centre of the lowest neighbouring windows, the effect on daylight and sunlight to the habitable rooms in the relevant neighbouring properties is assessed using the following tests:

- Daylight:
  - vertical sky component (VSC) at the window, and
  - daylight distribution (DD) / no-sky contour (NSC) on the working plane inside the room

- Sunlight:
  - percentage of annual probable sunlight hours (APSH) for windows of main habitable rooms that face within 90° due south, both annually and in the winter months

- Sunlight to gardens/amenity spaces:
  - percentage of each area that receives at least two hours of sunlight on 21 March
  - where a large building is proposed, shadow plots can be produced at different times of day and year, with the equinox (21 March) being the best assessment date and summer and winter solstices (21 June and 21 December) as optional additional dates.

The assessments are run in the existing and proposed scenarios on an absolute scale, followed by a comparative scale measuring the factor of former value or percentage reduction, so that the magnitude of impact is quantified.

The BRE numerical guidelines work on the principle that, except where certain minimum values will be retained with the proposed development in place (i.e. 27% VSC, 25% APSH annually, 5% APSH in winter and 50% of a garden/amenity space receiving at least two hours of sunlight), a reduction to less than 0.8 times former value (i.e. loss of more than 20% of an existing light level) will be noticeable to the occupiers.

As an optional supplementary daylight test, it can be useful to check the average daylight factor (ADF) in the proposed condition, particularly for neighbouring buildings that are consented but not yet built, and comparing the results with the minimum recommended values for new dwellings (2% ADF for kitchens, 1.5% ADF for living rooms and 1% ADF for bedrooms). The input variables for glazing transmittance, internal surface reflectance values and frame correction factors have a material effect on the results and should be stated in the assessment, so that their reasonableness may be checked.

Daylight/sunlight conditions within the proposed development

Daylight and sunlight conditions within the proposed development should be assessed using the aforementioned ADF, APSH (annual and winter) and 2-hour sun-on-ground tests in the proposed condition.

Where groups of dwellings are planned, site layout design should aim to minimise the number of single-aspect, north-facing flats and maximise the number of dwellings that meet the minimum recommended ADF values (2% ADF for kitchens, 1.5% ADF for living rooms and 1% ADF for bedrooms) and whose main living room meets the APSH recommendations (25% APSH annually, 5% APSH in winter). It can also be helpful to run the NSC test to check whether the rooms will enjoy a view of sky to at least 80% of their area.

The ADF calculation takes account of glazing transmittance, effects of dirt on glass, frame and glazing bar correction, internal surface reflectance and view of sky. Reasonable parameters must adopted and clearly stated in the report and the view of sky should be measured accurately taking account of external obstructions, including balconies.

3. Applicant's assessment and application of the guidelines

I have reviewed the scope and methodology of the assessment used in the daylight and sunlight report and am generally satisfied that it is sufficient and in accordance with the BRE methodology, subject to a few qualifications, as explained below.

Effects on daylight/sunlight to neighbouring properties

The assessment includes detailed tables of results of the levels of daylight and sunlight to the neighbouring properties in the existing and proposed conditions and the magnitude of impact, expressed as a percentage loss.

Results were included for VSC, DD/NSC and ADF assessments, but the input variables for the ADF calculation (glazing transmittance, internal surface reflectance and frame correction factors) have not been stated. I therefore assume GVA have adopted the default values recommended in the BRE guidelines and BS8206-2: 2008, *Lighting for buildings – Part 2; Code of practice for daylighting,* but you may wish to seek confirmation from the applicant on this point.

The assessment does not include an assessment of the effects on sunlight to the amenity spaces to the north of the proposed development, namely the back gardens of 4, 5 & 6 Collard Place or the amenity space/communal garden to 12 Ferdinand Street. I believe the sunlight to these gardens/amenity spaces is likely to be adversely affected by the proposed development and it would be preferable for the impacts to have been quantified using the BRE two-hours sun-on-ground assessment.

Daylight/sunlight conditions within the proposed development

The assessment report dated April 2016 states that "a sample set of studies" was undertaken within the proposed development. The report states the minimum and maximum ADF and NSC values achieved in the sample living/kitchen/dining rooms (LKDs) tested, but no information is provided on the sample size or location of rooms tested and no other results data is provided. No sunlight values are given at all to support the statement that "good sunlight amenity for an urban location" will be achieved and there is no evidence to suggest that sunlight to the proposed amenity spaces within site B has been assessed.

I consider this element of the assessment to be deficient and am unable to give you an independent opinion on the adequacy of daylight/sunlight conditions within the proposed development. If the Council wishes to understand the daylight and sunlight levels within the proposed development the applicant should be asked for the detailed results of the assessment and confirmation of the parameters used in the ADF calculation.

4. Effects of proposed development on existing surroundings

It is evident from the results of the assessment and revised assessment that whilst the effects on many of the surrounding properties will satisfy the BRE guidelines, there are a number of instances where the effects will be greater than the guidelines ordinarily recommend. In such instances, it is important to understand the reasons for the greater-than-recommended impacts in order to consider whether they are nonetheless acceptable when applying the guidance flexibly taking into account the site-specific circumstances and context and the advice given within the BRE guidelines. I will consider each of the surrounding properties or groups of properties in turn.

4-6 Collard Place

The effects on daylight and sunlight to the windows/rooms of these three houses are largely BRE adherent. Six out of nineteen windows will not meet the BRE recommendations; however, these noticeable impacts are only slightly greater than the BRE guidelines recommend (between 22% and 27% loss) and the retained VSC values will be reasonable for an urban location. Also, the NSC results will be BRE adherent with the exception of one minor transgression to a ground floor room at 6 Collard Place (22% loss), with the latter nonetheless retaining good daylight distribution (74% of the room area).

The effects on sunlight will be almost entirely BRE adherent, with all windows retaining in excess of 25% APSH annually and all but two windows retaining in excess of 5% APSH in the winter months. The two exceptions are one ground floor window to each of 6 and 5 Collard Place; however, their retained values (3% APSH) are not unreasonable for an urban location, in my view.

In summary, whilst there will be some noticeable loss of light to these houses, the transgressions of the guidelines are not excessive and the retained values are nonetheless reasonable for an urban location.

No assessment has been undertaken of the sunlight to the back gardens and I believe that it would be prudent to ask the applicant to provide this in order to gain a complete picture of the potential effects on amenity to these houses.

1 & 2 Ferdinand Place

My understanding is that the ground floor of these properties is in commercial use (or provides a common entrance hall to the residential units above) and can essentially be ignored, as one is typically more concerned to understand the impacts on residential amenity.

Looking at the potential effects on the residential windows, the revised assessment shows that the impacts on VSC to the first floor windows will be greater than is recommended to all bar two windows, with between 23% and 30% loss; however, they will all retain reasonable daylight levels for the location (between 20% and 27% VSC). The impacts on VSC to the second and third floor windows will all be BRE adherent. There are a few windows in the east-facing elevation that just face within 90° of due south and the effect on sunlight to these windows will all be BRE adherent.

The assessment and revised assessment do not state the use, and therefore sensitivity, of the affected rooms. The objector (OpticRealm) and their daylight consultant (Anstey Horne) have highlighted that floor plans for the building are publicly available on the Council's planning website (application 2006/4101/P). These show that the first and second floor rooms are all bedrooms, with the exception of one, deep LKDs on each floor. At third floor level, which is set back slightly, there are two large LKDs and two bedrooms. The assumed rooms are reasonably similar to the bedrooms and the NSC results are therefore sufficiently accurate for those rooms. These show four transgressions at first floor level only. The LKD is materially deeper than was assumed and so that borderline transgression at first floor level will actually be a more material impact and there will probably be a transgression in the corresponding LKD on the second floor. That said, and as GVA point out in their response letter, the BRE guide acknowledges that in rooms greater than 5m deep (the LKD is circa 7.5m deep) a greater impact of the no-sky contour maybe unavoidable.

The BRE guidelines also note that its standard numerical target values are purely advisory and different targets may be used based on the special requirements of the proposed development or its location. The guide gives various examples, such as areas with taller buildings where a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings. The drawings of the revised proposals for site B show it will be a similar height to the neighbouring properties at 2 Ferdinand Place and 10/12 Ferdinand Street. If the Council accept the principle of the proposed height and massing on site B, then I believe these impacts on 2 Ferdinand Place are inevitable and reasonable in the site context.

Broomfield, Ferdinand Street

The revised assessment has tested two rooms per floor, one of which is a dual-aspect room. The impacts on the single-aspect room will be fully BRE adherent. The impacts on the dual-aspect room show transgressions of the VSC guideline to the south-facing window at ground and first floor level (38% and 31% loss respectively) but BRE-adherent impacts on the other windows, which will retain reasonable daylight levels for an urban location. Furthermore, there will no effect on NSC to any of these rooms.

Turning to sunlight, the effects on annual sunlight will satisfy the guidelines for the first to fifth floor windows, but the ground floor window will drop slightly below the 25% APSH guideline with a retained value of 22%. Half of the windows will satisfy the winter sunlight guideline, with those at ground to second floor level experiencing a noticeable reduction in winter sunlight, but retained values of 3% APSH, which are only slightly below the 5% APSH guideline.

Overall, whilst there will be some noticeable effects on daylight and sunlight amenity, I consider that the retained daylight and sunlight levels will nonetheless be reasonable.

10 Ferdinand Place

The only adverse impacts on this building are to the three east-facing secondary windows from first to third floor levels which are part of a wrap-around window design with primary windows on the south elevation. Each serves a bedroom (according to publicly available plans in planning application 2006/4101/P). Whilst these will experience noticeable loss of daylight to the secondary window (between 38% and 62% loss), the adjacent main window will retain in excess of 27% VSC in each case and satisfy the guidelines. Furthermore, according to the archive floor plans, each bedroom is also lit by a further window in the south-facing elevation and there will be negligible reduction in the daylight distribution within the rooms. The main window to each room will also continue to enjoy excellent sunlight with no loss of sunlight resulting from the proposed development.

It is unusual that the secondary windows have been formed directly on the boundary; however, the applicant's proposed design sets back from these windows so as not to completely block them and the bedrooms will nonetheless retain good daylight and sunlight. I therefore conclude that the effects on this property will be acceptable.

12 Ferdinand Street

The impacts on this recent development are the most challenging. The revised assessment still shows very significant loss of light to the windows and rooms (all of which are bedrooms apart from one ground floor studio flat) in spite of removing one storey from the design.

The proposed development will result in large relative reductions in VSC (41% to 61% at ground floor level, 34% to 98% at first floor level, and 19% to 74% at second floor level) and it is only at third floor level that the VSC impacts satisfy the guidelines. The NSC test shows a similar picture. The ADF has also been calculated (although, see my comments above regarding parameters used in the ADF calculation not being stated in the report). This shows that all three bedrooms at third floor level and one each at second and first floor levels will satisfy the guidelines; however, two at ground floor level will be slightly below the guideline (0.8% to 0.9% ADF compared with the recommendation of 1%) and four (two each at first and second floor levels) will be a long way short of the guideline (0.1% to 0.4% ADF), as will the ground floor studio (0.8% compared with the recommendation of 2%). In fact, these results are worse than the original assessment even though a floor has been omitted, but there is no covering report to explain the results.

Turning to the sunlight results, one window per floor faces within 90° of due south and has been assessed. Those at second and third floor levels will enjoy good levels of sunlight and satisfy the guidelines. Those at ground and first floor levels will be below the guidelines and experience noticeable loss of sunlight as a consequence of the proposed development.

No assessment has been undertaken of the impact on sunlight to the amenity space at the rear of 12 Ferdinand Street, but it is obvious to me that with the proposed development in place very little, if any, sunlight would reach it on 21 March.

The recently-completed development at 12 Ferdinand Place was designed in a U-shape in conjunction with 10 Ferdinand Street (owned by the same party) taking light from over the application site B (1-3 Ferdinand Place) to light its rear rooms (principally bedrooms). However, the design of the development is such that the inclusion of projecting balconies at each floor level and the enclosing wings to the north and south mean that it has imposed a heavy restriction on its own light, so much so that some of the existing VSC values are low even for an urban area. Coupled with the fact that what light it does enjoy is principally enjoyed from over the application site, rather than from over its own land, this makes it unusually sensitive to development on the application site, because even a reasonable increase in massing will obstruct the view of sky at lower altitudes that is visible beneath the projecting balconies.

If one were to apply the BRE guidelines rigidly, the presence of balconies/wings and the proximity of windows to the boundary would mean it would not be possible for a development on site B to be much more than about two storeys in height before transgressions would arise, which I believe would impose an unreasonable constraint on the application site.

In my view, 12 Ferdinand Street cannot be considered a 'good neighbour' within the meaning of the BRE guidelines, standing a reasonable distance from the boundary and taking no more than its fair share of light (see paragraph 2.2.3 of the BRE guide). I also believe due account should be taken of the limiting effect of the balconies and projecting wings on the sensitivity of the rear-facing windows to loss of light (see paragraph 2.2.11 and 2.2.12 of the BRE guide). Ideally, GVA would have run a further assessment of the effects of the proposed development with the balconies and projecting wings removed, as the BRE guidelines suggest, to confirm that it is the balconies and projecting wings of this building itself which is the greater factor in the relative light loss than simply the proposed development. Nevertheless, I am of the opinion that such a study would confirm that.

If the height and form of proposed massing, which will fit in with the height of other surrounding developments, is considered acceptable in principle, then it is inevitable there will be a noticeable loss of daylight and sunlight to the rooms at the rear of 12 Ferdinand Street and its amenity space. Fortunately, all but one of the rooms are bedrooms, which are considered less important.

1A & 1-11 Harmood Street

With the exception of one very minor winter sunlight transgression to a ground floor window at 5 Harmood Street (reduction from 2% APSH to 1% APSH), the effects on daylight and sunlight amenity to these properties will be fully BRE adherent.

39-44 Chalk Farm Road

With the exception of one minor NSC transgression (30% loss to a second floor room at 40-42 Chalk Farm Road), all daylight impacts on these properties will be BRE adherent. Sunlight is not an issue as their windows looking over the development site do not face within 90° of due south.

6. Internal daylight and sunlight within the proposed development

As explained in section 3, I consider the internal daylight/sunlight assessment to be deficient and am unable to give an independent opinion on the adequacy of conditions within the proposed development. If the Council wishes to understand the daylight and sunlight levels within the proposed development the applicant should be asked for the detailed results of the assessment and confirmation of the parameters used in the ADF calculation.

7. Conclusion

The proposed development will result in a number of adverse impacts on daylight and sunlight to existing surrounding properties to a level greater than the BRE guidelines would ordinarily recommend. However, the Council's SPG notes that the guidelines and resulting daylight and sunlight levels will be considered flexibly taking into account site-specific circumstances and context. The BRE guidelines refer to development fitting in with the height and massing of surrounding buildings as being an instance where greater impacts may therefore arise. I believe that is a reasonable argument to make in this instance, provided the Council accept the principle of the proposed height and massing on site B in particular.

The impacts on the bedrooms and one studio in 12 Ferdinand Street are the most challenging, because there will be a very noticeable loss of light. However, this is largely on account of the design of this building with projecting balconies above the windows and projecting wings on both sides, which severely inhibit the view of sky and, together with their proximity to the boundary, mean they take virtually all of their light from over the application site and are overly sensitive to changes in massing on the application site. It would be unreasonable, in my view, to expect adherence to the guidelines in this instance, not least because to do so would limit the proposed development to little more than two storeys. It does give rise to a difficult decision; however, all but one of the affected flats have their main living space on the far side of the building overlooking Ferdinand Street, which will be unaffected by the proposed development and bedrooms are considered less important than living rooms. The applicant has not run a supplementary assessment with the balconies and projecting wings removed, but I expect such a test would confirm that it is the balconies/projecting wings that are the greatest factor in the relative impact.

Whilst there will be some adverse impact on daylight and sunlight to 5 & 6 Collard Place, I consider this to be to a reasonable degree. I suspect there will be some adverse impact on sunlight to their gardens, but no assessment has been undertaken. To complete the picture, it would be preferable for such an assessment to be submitted.

As for conditions within the proposed development, an assessment has apparently been undertaken of a sample selection of flats, but no detailed results have been provided. A very brief summary statement is given within the original assessment, but without any supporting data I am unable to form an opinion on the reasonableness or otherwise of the scope of the assessment or its results. If the Council has any concerns about the level of daylight and sunlight amenity within the proposed development, it should request the results tables and drawings from the applicant's consultant (in which case it should also seek confirmation of the parameters used in the ADF calculation).

I trust this provides you with what you need. If you have any queries, please let me know.

Yours sincerely

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