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Daylight and sunlight impact assessment report for the proposed development at:

55 Cumberland Terrace/29 Cumberland Terrace Mews London NW1 4HJ

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# 1. <u>Executive summary</u>

- **1.1.** <u>Introduction</u>
- **1.1.1.** We have been instructed by Jonathan and Nathalie Esfandi to determine the impacts, if any, on daylight and sunlight amenity of properties neighbouring 55 Cumberland Terrace, and 29 Cumberland Terrace Mews arising from the proposed minor development work of 55 Cumberland Terrace, and 29 Cumberland Terrace Mews, London (referred to as the **"Application Site" in this report**).
- **1.1.2.** Having reviewed the application drawings it is apparent that the only aspect of the proposed development having a bearing on daylight and sunlight is a small extension at ground floor level required to enable creation of a new family room.
- **1.1.3.** The Application Site and its environs have been inspected, and research using the planning records of the local planning authority has been undertaken for properties neighbouring the Application Site.
- **1.1.4.** From the observations made during our inspection and our research using the planning records, it is apparent that only one adjoining property is likely to be affected by the proposed extension. The property concerned is 54 Cumberland Terrace/28 Cumberland Terrace Mews to the south of the Application Site. This property forms part of the Georgian terrace comprising Cumberland Terrace and it has its own mews building to the rear. Only a small number of windows and rooms serving 54 Cumberland Terrace/28 Cumberland Terrace Mews are close enough to the proposed extension to warrant detailed analysis.

# **1.2.** <u>Assessment approach</u>

- 1.2.1. To ensure that the proposed development can be evaluated objectively against the planning policy of the London Borough of Camden, standard daylight and sunlight calculations have been undertaken in accordance with the procedures, methodologies and targets set out in the Building Research Establishment Report entitled *'Site Layout Planning for Daylight and Sunlight A Guide to Good Practice'* 2<sup>nd</sup> Edition, 2011 (the "BRE guide")
- **1.2.2.** The BRE guide's assessment procedures, methodologies and targets are briefly described in Appendix A.

# **1.3.** Summary of effect on 54 Cumberland Terrace/28 Cumberland Terrace Mews.

Daylight

- **1.3.1.** Daylight amenity is assessed for windows, and the rooms they serve, using the Vertical Sky Component (VSC) metric for windows and the Daylight Distribution (DD) metric for rooms. 54 Cumberland Terrace/28 Cumberland Terrace Mews has windows and rooflights at lower ground and ground floor levels, which serve the main house, the smaller mews building and the link construction between the two. These are the windows and rooflight that have been assessed.
- **1.3.2.** All windows assessed satisfy the BRE guide's requirements for VSC values and all rooms satisfy the values for Daylight Distribution.



**1.3.3.** The proposed development complies with the recommendations in the BRE guide. It is not expected to affect the daylight amenity of 54 Cumberland Terrace/28 Cumberland Terrace Mews at all.

Sunlight

- **1.3.4.** Sunlight amenity is assessed for windows and rooflights only (not rooms) and is measured in Probable Sunlight Hours (PSH) both annually and during the winter period. Only those windows facing within 90 degrees of due south require assessment because only these windows are orientated in a direction that provides access to significant sunlight.
- **1.3.5.** One window and two large roof lights serving the mews building and the link area respectively at 54 Cumberland Terrace/28 Cumberland Terrace Mews are orientated within 90 degrees of due south. Only these require assessment.
- **1.3.6.** The assessed window and rooflights will not experience changes to their sunlight amenity once the proposed extension is complete. Thus, the proposed development is not expected to affect the sunlight amenity of any parts of 54 Cumberland Terrace/28 Cumberland Terrace Mews and it complies with the recommendations in the BRE guide.

Overshadowing

- **1.3.7.** At 54 Cumberland Terrace/28 Cumberland Terrace Mews does not have any external open amenity spaces for which an overshadowing study is relevant.
- 1.4. <u>Conclusion</u>
- **1.4.1.** The proposed extension complies with the recommendations in the BRE guide and will not have any detrimental impact on the daylight or sunlight amenity of 54 Cumberland Terrace/28 Cumberland Terrace Mews.



# 2. <u>Introduction</u>

# **2.1.** Instructions and brief

2.1.1. We have been instructed by Jonathan and Nathalie Esfandi to determine the impacts, if any, on daylight and sunlight amenity of relevant properties neighbouring 55 Cumberland Terrace, and 29 Cumberland Terrace Mews, London arising from the works they propose to extend 55 Cumberland Terrace, and 29 Cumberland Terrace Mews (referred to as the "Application Site" in this report).

# 2.2. <u>Site inspection and research</u>

- **2.2.1.** The Application Site and its environs were inspected in May 2020; it lies in a residential area and forms part of a Grade 1 historic Georgian terrace.
- 2.2.2. Lying to the immediately north of the Application Site is 56 Cumberland Terrace/30 Cumberland Terrace Mews and to the south is 54 Cumberland Terrace/28 Cumberland Terrace Mews both Georgian villas in the terrace of similar design and configuration to the Application Site.
- **2.2.3.** There are no relevant properties to the east or west of the Application Site.
- 2.2.4. Research using the planning records of the local planning authority, has subsequently been undertaken for buildings adjoining he development Site. Information relating to the internal arrangement of 54 Cumberland Terrace/28 Cumberland Terrace Mews is available and copies of the information obtained are contained in Appendix B to this report.
- 2.2.5. An internal inspection of adjoining properties has not been undertaken as there is sufficient information available from planning records showing internal arrangements, room sizes and room uses. It is also unusual to seek, or obtain, access to adjoining properties when preparing daylight and sunlight amenity reports; planning policy and technical guides do not require this.

# **2.3.** <u>The application site</u>

- 2.3.1. The Application Site comprises a Grade I listed Georgian villa sitting in a terrace of similar properties on the east side of Cumberland Terrace. It comprises a five-storey main villa building fronting Cumberland Terrace and a smaller two-storey mews building to the rear (east). Between the main villa and the mews building, the original yard has, at some time in the past, been infilled with accommodation at lower ground floor level and ground floor level.
- **2.3.2.** The Application Site has no significant external areas apart from a small open well area, descending to lower ground floor level, sitting immediately to the rear of the main house.

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# 2.4. <u>The development proposed</u>

**2.4.1.** Design information concerning the works proposed has been reviewed and takes the form of the following drawings produced by architects, Collett~Zarzycki:

2001-E-001 Rev / - Existing lower ground floor and ground floor plan 2001-E-002 Rev / - Existing first floor and second floor plan 2001-E-003 Rev / - Existing third floor and roof plan 2001-E-004 Rev / - Existing elevations 2001-E-005 Rev / - Existing section A-A 2001-E-006 Rev / - Existing section B-B 2001-P-001 Rev E Proposed lower ground floor and ground floor plan 2001-P-002 Rev C Proposed first floor and second floor plan 2001-P-003 Rev C Proposed third floor and roof plan 2001-P-004 Rev C Proposed televations 2001-P-005 Rev E - Proposed section A-A 2001-P-006 Rev E - Proposed section B-B 2001-P-007 Rev E - Proposed section B-B

2.4.2. These drawings indicate that the only proposed change in the external envelope of 55 Cumberland Terrace/29 Cumberland Terrace Mews concerns a section of the property at ground floor level which links the original villa to the mews building to the rear. At this floor level, it is proposed to extend the existing accommodation out, over an existing flat roof, to its southern boundary with 54 Cumberland Terrace/28 Cumberland Terrace Mews to enable creation of a new single storey family room. The extension will have a flat roof and shallow parapet. Drawings 2001-P-001 and 2001-P-005 show the extension proposed.

# **2.5.** <u>Neighbouring properties</u>

- **2.5.1.** From the observations made during the site inspection, and research using the planning records, it is apparent that only one adjoining property is likely to be affected by the proposed extension. The property concerned is 54 Cumberland Terrace/28 Cumberland Terrace Mews to the south of the Application Site.
- 2.5.2. The proposed extension will not affect the daylight or sunlight of any of the windows serving 56 Cumberland Terrace/30 Cumberland Terrace Mews because the proposed additional massing is located on the southern side of the Application Site and will be concealed behind existing massing already built on the Application Site at ground floor level.
- **2.5.3.** 54 Cumberland Terrace/28 Cumberland Terrace Mews forms part of the period terrace comprising Cumberland Terrace and has its own two-storey mews building to the rear, a main, five-storey, villa to the front and an infill link building between the two.
- **2.5.4.** The site inspection has confirmed that only a small number of windows and rooms serving 54 Cumberland Terrace/28 Cumberland Terrace Mews are close enough to the proposed extension to warrant detailed technical analysis.
- 2.5.5. Our technical analysis has been undertaken using a 3D CAD model of the proposed development, its surroundings and the adjoining building comprising 54 Cumberland Terrace/28 Cumberland Terrace Mews. Specialist analytical software has then been used in conjunction with the 3D model to calculate the daylight and sunlight metrics recommended in the BRE guide.



# **2.6.** Planning policy

2.6.1. London Borough of Camden's Local Plan contains the following policy guidance under Policy A1: Managing the impact of development:

# "Sunlight, daylight and overshadowing

- 6.5 Loss of daylight and sunlight can be caused if spaces are overshadowed by development. To assess whether acceptable levels of daylight and sunlight are available to habitable, outdoor amenity and open spaces, the Council will take into account the most recent guidance published by the Building Research Establishment (currently the Building Research Establishment's Site Layout Planning for Daylight and Sunlight A Guide to Good Practice 2011)."
- 2.6.2. Pursuant to the policy cited above, a daylight and sunlight amenity assessment has been undertaken in accordance with the procedures and methodologies recommended in the guidance document published by Building Research Establishment BRE called "*Site Layout Planning for Daylight and Sunlight a guide to good practice*, 2nd Edition, 2011" ("the BRE guide"). This enables impacts on daylight and sunlight amenity to be calculated and reviewed objectively against recommended targets. The procedures and methodologies applied are explained in Appendix A.
- **2.6.3.** The Application Site is shown arrowed orange on the aerial image that follows. 54 Cumberland Terrace/28 Cumberland Terrace Mews lies immediately to the south.





# **2.7.** Assembly of 3D model

- 2.7.1. Our assessment is based on the comprehensive set of scheme drawings provided to us by architects, Collett-Zarzycki, in both .pdf and .dwg file formats, as listed in section 2.4 preceding. This includes a set of measured survey drawings for the Application Site in its current form.
- **2.7.2.** We have also obtained 3D solid model information from an independent supplier to provide wider context massing for the built environment around the Application Site.
- 2.7.3. The 3D solid model information, measured survey drawings, archive planning information obtained and drawing data available for the proposed development have enabled the production of an accurate 3D CAD model of both the Application Site, in its current form, and also 54 Cumberland Terrace/28 Cumberland Terrace Mews building relative to the Application Site.
- **2.7.4.** Basic views in 3D of the context model prepared for the technical analysis are contained in the drawings forming Appendix C.



# 3. <u>Assessment- 54 Cumberland Terrace/28 Cumberland Terrace</u> <u>Mews</u>

# 3.1. Daylight amenity

**3.1.1.** In accordance with the BRE guide, VSC values and DD values have been calculated for windows and rooflights of 54 Cumberland Terrace/28 Cumberland Terrace Mews which overlook the proposed extension and their associated rooms. The rooms concerned comprise:

Ground floor:

- A bedroom in the mews building.
- A kitchen in the central link building.
- A toilet in the central link building.
- A study in the main villa.

Lower ground floor:

- A gym.
- An enclosed patio area.
- A playroom.
- **3.1.2.** The photographs below contain images of the relevant windows and rooflight to 54 Cumberland Terrace/28 Cumberland Terrace Mews and were taken from 55 Cumberland Terrace, and 29 Cumberland Terrace Mews.



Above: Main lower ground floor rooflight with kitchen windows to righthand side and bedroom window to rear.



Above: Higher level view of infill link area to 54 Cumberland Terrace/28 Cumberland Terrace Mews.



Above: Second rooflight to right of main rooflight with all 3 windows serving kitchen visible.



Above: View at ground floor level across rooflight towards kitchen windows of 54 Cumberland Terrace/28 Cumberland Terrace Mews.



- **3.1.3.** Drawings 87970MD\_DD\_01; 87970MD\_DD\_02; 87970MD\_WR\_01 and 87970MD\_WR\_02 attached at Appendix D, identify the windows, rooflights and rooms in the photographs above using number references. The windows, rooflights and room reference numbers that appear in the table below relate to the reference numbers in these drawings.
- **3.1.4.** The results for VSC and DD values calculated for the relevant rooms and spaces in 54 Cumberland Terrace/28 Cumberland Terrace Mews are set out in the table that follows. Please note that Room R3 at ground floor level is believed to be a toilet area and light to a room with such a use does not require assessment, if the recommendations of the BRE guide are applied. Therefore, the table below omits commentary on room R3.

				Vertical Sky Component				Daylight D	istribution	
Floor	Room	Window	Existing Window VSC (%)	Proposed Window VSC (%)	Times Former Value	VSC BRE Compliant ?	Existing Room DD (sq.m.)	Proposed Room DD (sq.m.)	Times Former Value	DD BRE Compliant ?
Lower Ground	R1	W1	45.49	43.86	0.96	Yes	34.5	31.7	0.92	Yes
Lower Ground	R2	W2	42.03	41.40	0.99	Yes	10.7	10.7	1.00	Yes
		W3	0.00	0.00	1.00	Yes				
		W4	5.18	5.18	1.00	Yes				
Lower Ground	R3	W5	11.46	10.87	0.95	Yes	12.0	12.0	1.00	Yes
Ground	R1	W1	11.03	10.96	0.99	Yes	2.7	2.7	1.00	Yes
Ground	R2	W2	21.30	20.97	0.98	Yes	24.1	24.1	1.00	Yes
		W3	20.99	20.65	0.98	Yes				
		W4	18.71	18.52	0.99	Yes				
Ground	R4	W6	29.24	29.05	0.99	Yes	14.8	14.8	1.00	Yes

- **3.1.5.** The daylight amenity results above confirm that all rooms/spaces in 54 Cumberland Terrace/28 Cumberland Terrace Mews will retain sufficient light to their windows and sufficient distribution of light in each room / space because there is either no change at all in the VSC or DD metric, or the change in the existing VSC value and DD value does not exceed 0.8 times of the existing value.
- **3.1.6.** In conclusion, the proposed extension is compliant with the recommendations of the BRE guide concerning the daylight amenity of neighbouring properties.

# 3.2. <u>Sunlight amenity</u>

- **3.2.1.** The BRE guide explains that material quantities of sunlight will be enjoyed by only those windows that face within 90 degrees of due south. It also states that sunlight to windows serving circulation areas, bathrooms, toilets, store rooms and garages need <u>not</u> be considered. Furthermore, the BRE guide states that sunlight to bedrooms may be assessed but is less important to rooms with such a use.
- **3.2.2.** In accordance with the BRE guide, PSH (Probable Sunlight Hours) values have been calculated for only those apertures of 54 Cumberland Terrace/28 Cumberland Terrace Mews orientated in the relevant direction. There are only four relevant apertures one is a window at ground floor level (serving a bedroom in the mews building) and the other apertures are actually rooflights serving lower ground floor spaces.



		ht /	Existing PSH		Proposed PSH		Times Former Value		Window	
Floor	Room	Windov Roofilg	Winter PSH (%)	Annual PSH (%)	Winter PSH (%)	Annual PSH (%)	Winter	Annual	Compliant	
Lower Ground	R1	W1	0	1	0	1	1.00	1.00	Yes	
Lower Ground	R2	W2	0	1	0	1	1.00	1.00	Yes	
		W3	0	0	0	0	1.00	1.00	Yes	
Ground	R1	W1	1	7	1	7	1.00	1.00	Yes	

# **3.2.3.** The table below summarises the results of the PSH assessment.

**3.2.4.** The BRE guide advises, in a summary at the end of section 3.2, that the sunlight amenity of an existing building neighbouring a development may be adversely affected if it is found that the centre of a relevant window:

"enjoys less than 25% of the annual probable sunlight hours, or less than 5% of the sunlight hours over the winter period;

and

receives less than 0.8 times the former value of annual probable sunlight hours or less than 0.8 times the former value of winter sunlight hours;

and

experiences a reduction in sunlight hours received over the whole year greater than 4% of annual probable sunlight hours."

- **3.2.5.** Strict application of the criteria set out above implies that if only one or two of them apply to a window, there <u>remains</u> the potential for adequate sunlight amenity to that window. All three criteria have to be triggered for there to be a detrimental impact. For example, a particular window might not attain 25% PSH in the annual period or 5% PSH in the winter period, but sunlight amenity would not be affected adversely if the PSH values attained after completion of a development are still 0.8 times its former value or more or if the reduction in sunlight received over the whole year is less than 4%.
- **3.2.6.** When the targets described above are considered, of the 4 apertures to 54 Cumberland Terrace/28 Cumberland Terrace Mews assessed, all (100%) will continue to meet the target values as set out in the BRE guide. Because of their location, the massing of 54 Cumberland Terrace/28 Cumberland Terrace Mews itself obstructs the access of virtually all sunlight to the window and rooflights and, therefore, the proposed development does not worsen the position.
- **3.2.7.** In conclusion, the proposed development is not expected to compromise the sunlight amenity of any of the windows and rooflights to 54 Cumberland Terrace/28 Cumberland Terrace Mews and is compliant with the recommendations of the BRE guide concerning the sunlight.
- **3.3.** <u>Overshadowing of external amenity space</u>
- **3.3.1.** 54 Cumberland Terrace/28 Cumberland Terrace Mews does not have any external gardens, patios or roof terraces. Accordingly, the proposed development will not have an overshadowing effect on external open amenity spaces. A technical assessment of overshadowing in accordance with the BRE guide is not required.



# 4. <u>Conclusion</u>

- **4.1.1.** A detailed technical analysis has been undertaken for 54 Cumberland Terrace/28 Cumberland Terrace Mews only. No other neighbouring properties in residential use lie within relevant proximity of the development work proposed.
- **4.1.2.** The technical analysis has been conducted in accordance with the recommended methodologies and procedures set out in the BRE guide entitled, *'Site Layout Planning for Daylight and Sunlight A Guide to Good Practice'* 2<sup>nd</sup> Edition, 2011 and is based on a 3D computer model assembled for the purpose of such analysis.
- **4.1.3.** The findings of the detailed technical analysis confirm that none of windows and rooms in the external envelope of 54 Cumberland Terrace/28 Cumberland Terrace Mews will be impacted by a material change in the amount of daylight or sunlight amenity they enjoy.
- **4.1.4.** In conclusion, the proposed extension on the Application Site is expected to be fully compliant with the recommendations of the BRE guide in relation to its impacts on neighbouring properties.



Appendix A

Assessments applied



# Introduction

The main purpose of the guidelines in the Building Research Establishment Report "Site Layout Planning for Daylight and Sunlight – a guide to good practice 2011, 2<sup>nd</sup> Edition" ("the BRE guide") is to assist in the consideration of the relationship of new and existing buildings to ensure that each retains a potential to achieve good daylighting and sunlighting levels. That is, by following and satisfying the tests contained in the guidelines, new and existing buildings should be sufficiently spaced apart in relation to their relative heights so that both have the potential to achieve good levels of daylight and sunlight. The guidelines have been drafted primarily for use with low density suburban developments and should therefore be used flexibly when dealing with dense urban sites and extensions to existing buildings, a fact recognised by the BRE Report's author in the Introduction where Dr Paul Littlefair says:

'The Guide is intended for building designers and their clients, consultants and planning officials. The advice given here is not mandatory and the guide should not be seen as an instrument of planning policy; its aim is to help rather than constrain the designer. Although it gives numerical guidelines, these should be interpreted flexibly since natural lighting is only one of many factors in site layout **design.....** In special circumstances the developer or planning authority may wish to use different target values. For example, in a historic city centre, or in an area with modern high rise buildings, a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings.....'

In many cases in low-rise housing, meeting the criteria for daylight and sunlight may mean that the BRE criteria for other amenity considerations such as *privacy* and *sense of enclosure* are also satisfied.

The BRE guide states that recommended minimum privacy distances (in cases where windows of habitable rooms face each other in low-rise residential property), as defined by each individual Local **Authority's policies, vary widely, from 18**-35m<sup>1</sup>. For two-storey properties a spacing within this range **would almost certainly also satisfy the BRE guide's daylighting requirements as it complies with the 25**<sup>o</sup> **rule and will almost certainly satisfy the 'Three times height' test too (as discussed more fully below)**. However, the specific context of each development will be taken into account and Local Authorities may relax the stated minimum, for instance, in built-up areas where this would lead to an inefficient use of land. Conversely, greater distances may be required between higher buildings, in order to satisfy daylighting and sunlighting requirements. It is important to recognize also that privacy can also be achieved by other means: design, orientation and screening can all play a key role and may also contribute towards reducing **the theoretical 'minimum' distance**.

A sense of enclosure is also important as the perceived quality of an outdoor space may be reduced if it is too large in the context of the surrounding buildings. In urban settings the BRE guide suggests a spacing-to-height ratio of 2.5:1 would provide a comfortable environment, whilst not obstructing too much natural light: this ratio also approximates the 25<sup>o</sup> rule.

<sup>&</sup>lt;sup>1</sup> The commonest minimum privacy distance is 21m (Householder Development Consents Review: Implementation of Recommendations – Department for Communities and Local Government – May 2007)



# Daylight

The criteria for protecting daylight to existing buildings are contained in Section 2.2 and Appendix C of the BRE guide. There are various methods of measuring and assessing daylight and the choice of test depends on the circumstances of each particular window. For example, greater protection should be afforded to windows which serve habitable dwellings and, in particular, those serving living rooms and family kitchens, with a lower requirement required for bedrooms. The BRE guide states that circulation spaces and bathrooms need not be tested as they are not considered to require good levels of daylight. In addition, for rooms with more than one window, secondary windows do not require assessment if it is established that the room is already sufficiently lit through the principal window.

The tests should also be applied to non-domestic uses such as offices and workplaces where such uses will ordinarily have a reasonable expectation of daylight and where the areas may be considered a principal workplace.

The BRE has developed a series of tests to determine whether daylighting levels within new developments and rooms within existing buildings surrounding new developments will satisfy or continue to satisfy a range of daylighting criteria

Note: Not every single window is assessed separately, only a representative sample, from which conclusions may be drawn regarding other nearby dwellings.

# Daylighting Tests

<u>'Three times height' test</u> - If the distance of each part of the new development from the existing windows is three or more times its height above the centre of the existing window then loss of light to the existing windows need not be analysed. If the proposed development is taller or closer than this then the 25° test will need to be carried out.

<u>25° test</u> – a very simple test that should only be used where the proposed development is of a reasonably uniform profile and is directly opposite the existing building. Its use is most appropriate for low density well-spaced developments such as new sub-urban housing schemes and often it is not a particularly useful tool for assessing urban and in-fill sites. In brief, where the new development subtends to an angle of less than 25° to the centre of the lowest window of an existing neighbouring building, it is unlikely to have a substantial effect on the diffuse skylight enjoyed by the existing building. Equally, the new development itself is also likely to have the potential for good daylighting. If the angle is more than 25° then more detailed tests are required, as outlined below.

<u>VSC Test</u> - the VSC is a unit of measurement that represents the amount of available daylight from the **sky, received at a particular window**. It is measured on the outside face of the window. The 'unit' is expressed as a percentage as it is the ratio between the amount of sky visible at the given reference point compared to the amount of light that would be available from a totally unobstructed hemisphere of sky. To put this unit of measurement into perspective, the maximum percentage value for a window with a completely unobstructed outlook (i.e. with a totally unobstructed view through 90° in every direction) is 40%.

The target figure for VSC recommended by the BRE is 27%. A VSC of 27% is a relatively good level of daylight and the level we would expect to find for habitable rooms with windows on principal elevations. However, this level is often difficult to achieve on secondary elevations and in built-up urban environments. For comparison, a window receiving 27% VSC is approximately equivalent to a window that would have a continuous obstruction opposite it which subtends an angle of 25° (i.e. the same results as would be found utilising the 25° Test). Where tests show that the new development itself meets the 27% VSC target this is a good indication that the development will enjoy good daylighting and further tests can then be carried out to corroborate this (see under).



Through research the BRE have determined that in existing buildings daylight (and sunlight levels) can be reduced by approximately 20% of their original value before the loss is materially noticeable. It is for this reason that they consider that a 20% reduction is permissible in circumstances where the existing VSC value is below the 27% threshold. For existing buildings once this has been established it is then necessary to determine whether the distribution of daylight inside each room meets the required standards (see under).

Daylight Distribution (DD) Test – This test looks at the position of the "No-Sky Line" (NSL) – that is, the line that divides the points on the working plane (0.7m from floor level in offices and 0.85m in dwellings and industrial spaces) which can and cannot see the sky. The BRE guide suggests that areas beyond the NSL may look dark and gloomy compared with the rest of the room and BS8206 states that electric lighting is likely to be needed if a significant part of the working plane (normally no more than 20%) lies beyond it.

In new developments no more than 20% of a room's area should be beyond the NSL. For existing buildings the BRE guide states that if, following the construction of a new development, the NSL moves so that the area beyond the NSL increases by more than 20%, then daylighting is likely to be seriously affected.

The guide suggests that in houses, living rooms, dining rooms and kitchens should be tested: bedrooms are deemed less important, although should nevertheless be analysed. In other buildings each main room where daylight is expected should be investigated.

<u>ADF Test</u> – The ADF (Average Daylight Factor) test takes account of the interior dimensions and surface reflectance within the room being tested as well as the amount of sky visible from the window. For this reason it is considered a more-detailed and representative measure of the adequacy of light. The minimum ADF values recommended in BS8206 Part 2 are: 2% for family kitchens (and rooms containing kitchens); 1.5% for living rooms; and 1% for bedrooms. This is a test used in assessing new developments, although, in certain circumstances, it may be used as a supplementary test in the assessment of daylighting in existing buildings, particularly where more than one window serves a room.

<u>Room depth ratio test</u> - This is a test for new developments looking at the relative dimensions of each room (principally its depth) and its window(s) to ensure that the rear half of a room will receive sufficient daylight so as not to appear gloomy.

# Sunlight

Sunlight is an important 'amenity' in both domestic and non-domestic settings. The way in which a building's windows are orientated and the overall position of a building on a site will have an impact on the sunlight it receives but, importantly, will also have an effect on the sunlight neighbouring buildings receive. Unlike daylight, which is non-directional and assumes that light from the sky is uniform, the availability of sunlight is dependent on direction. That is, as the United Kingdom is in the northern hemisphere, we receive virtually all of our sunlight from the south. The availability of sunlight is therefore dependent on the orientation of the window or area of ground being assessed relative to the position of due south.



In <u>new developments</u> the BRE guide suggests that dwellings should aim to have at least one main living room which faces the southern or western parts of the sky so as to ensure that it receives a reasonable amount of sunlight. Where groups of dwellings are planned the Guide states that site layout design should aim to maximise the number of dwellings with a main living room that meet sunlight criteria. Where a window wall faces within 90° of due south and no obstruction subtends to angle of more than 25° to the horizontal or where the window wall faces within 20° of due south and the reference point has a VSC of at least 27% then sunlighting will meet the required standards: failing that the Annual Probable Sunlight Hours (APSH) need to be analysed. APSH means the total number of hours in the year that the sun is expected to shine on unobstructed ground, allowing for average levels of cloud for the location in question. If the APSH tests reveal that the new development will receive at least one quarter of the available APSH, including at least 5% of APSH during the winter months (from 21 September to 21 March), then the requirements are satisfied. It should be noted that if a room has two windows on opposite walls, the APSH due to each can be added together.

The availability of sunlight is also an important factor when looking at the impact of a proposed development on the <u>existing surrounding buildings</u>. APSH tests will be required where one or more of the following are true:

- The 'Three times height' test is failed (see 'Daylight' above);
- The proposed development is situated within 90° of due south of an existing building's main window wall and he new building subtends to angle of more than 25° to the horizontal;
- The window wall faces within 20° of due south and a point at the centre of the window on the outside face of the window wall (the reference point) has a VSC of less than 27%.

Where APSH testing is required it is similar to the test for the proposed development. That is to say that compliance will be demonstrated where a room receives:

- At least 25% of the APSH (including at least 5% in the winter months), or
- At least 0.8 times its former sunlight hours during either period, or
- A reduction of no more than 4% APSH over the year.

The Guide stresses that the target values it gives are purely advisory, especially in circumstances such as: the presence of balconies (which can overhang windows, obstructing light); when an existing building stands unusually close to the common boundary with the new development and; where the new development needs to match the height and proportion of existing nearby buildings. In circumstances like these a larger reduction in sunlight may be necessary.

The sunlight criteria in the BRE guide primarily apply to windows serving living rooms of an existing dwelling. This is in contrast to the daylight criteria which apply to kitchens and bedrooms as well as living rooms. Having said that, the guide goes on to say that care should be taken not to block too much sun from kitchens and bedrooms. Non-domestic buildings which are deemed to have a requirement for sunlight should also be checked.

# Sunlight - Gardens and open spaces

As well as ensuring buildings receive a good level of sunlight to their interior spaces, it is also important to ensure that the open spaces between buildings are suitably lit. The recommendations as set out in the BRE guide are meant to ensure that spaces between buildings are not permanently in shade for a large part of the year. Trees and fences over 1.5m tall are also factored into the calculations.



The BRE guidelines state that:

- For a garden or amenity area to appear adequately sunlit throughout the year, at least 50% of the area should receive at least two hours of sunlight on 21 March;
- In addition, if, as result of new development, an existing garden or amenity area does not reach the
  area target above and the area which can receive two hours of direct sunlight on 21 March is
  reduced by more than 20% this loss is likely to be noticeable.

Appendix G of the BRE guidelines describes a methodology for calculating sunlight availability for amenity spaces.



# Appendix B

# 54 Cumberland Terrace/28 Cumberland Terrace Mews plans















28 CUMBERLAND TERRACE MEWS

REAR OF 54 CUMBERLAND TERRACE LONDON NW1 4HJ

FIRST FLOOR PLAN as Proposed

2016.08.01

CT2-PP2/100







HOUSE NO 27

HOUSE NO 28

28 CUMBERLAND TERRACE MEWS

REAR OF 54 CUMBERLAND TERRACE LONDON NW1 4HJ

GROUND FLOOR PLAN as Proposed

1:50/A3

2016.11.08

CT2-PP1/50 rev.A



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# 28 CUMBERLAND TERRACE MEWS

REAR OF 54 CUMBERLAND TERRACE LONDON NW1 4HJ

ELEVATION as Proposed

1:100/A3

2016.11.08

CT2-PP3 rev.A









CUMBERLAND TERRACE









**KASIA WHITFIELD** 020 75869624 07985 035333 KasiaWhitfield@gmail.com design consultant

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# CUMBERLAND TERRACE MEWS

28 CUMBERLAND TERRACE MEWS

**REAR OF 54 CUMBERLAND TERRACE** LONDON NW1 4HJ

FIRST FLOOR PLAN as Existing

1:50/A3

2016.08.01

CT2-EX2/50

HOUSE NO 27

HOUSE NO 28











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# 28 CUMBERLAND TERRACE MEWS

REAR OF 54 CUMBERLAND TERRACE LONDON NW1 4HJ

ELEVATION as Existing

- 1:100/A3
- 2016.08.01

CT2-EX3



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TARGE OFF EXISTING STONE COPINES.

TAKE OF GRISTING ASPHALTE RADE COVENING. TORM DEGNINGS FOR REOFLIGHTS, CARAY OUT STRUCTURAL REPARS TO ENGINEERS DETAILS. RECOVER REF WETHER 19 mm WILLY TIMBER USERNO KERBS, SO MM CODLAG INSULATION AND 20 m ASHIACTE ROBE CONSEING TO DETAIL SPEC. TIMBEL KERD AND TUCK INTO CHART

RENEW HOIPER HEAD'S RUSP IN -> 0----CAST IRAN & REFARM OUTLET IN -> 0----CODE 7 LEAD!

CASEMENTS WITH CORRECT PATTERN RECENCT GLAZING BARS

REMOVE EX. HOIST & MAKE GOOD -+ FLOOR TO DETAIL

FLEDR TO DETAIL





CASEMENTS WITH CONNECT PATTERN REGENCY GLAZNE BARS. FORM NEW SHUTTERS, SHUTTER BOXES, ARCHTRAVES ETC. TO CORRECT REGENCY PATTERN TO DETAIL. GENEMALY: RENEW CEILINGS WITH RASTER ON E.M.L. TO DETAIL SPEC. RENEW CORNICES W FIBROUS PUBLICK TO APPROVED REGENCY PATTERN TO SETAL REMOVE WALL PLASTOR TO FRONT WALL & WALLE DEFECTIVE + DADO. REPLASTER TO ASPROVED SPEC. RENEW DODRS, ALCHITRAVES E SKIRTWES TO COMPECT RECEIVEY RATTERN TO DETAIL Off & REPAR BALLONY, RENEW ASIHACTE TAKE OFF EX. METAL BALLISTRADES, REVARE & REFIX IN LEAD BY SPECIALIET SUBCONTACTOR 1<u>7</u> ..... REMOVE FORSEWORK TO HAVE LOBBY REFORM DUCTS FOR RWI IN STURNORK. NEW ALCHTTRAVES ETC. TO DETAIL O'H & ROLATIK FRANT ENTRANCE PORKS E BANLIGHT OVER of the Refare Frank STERS AND METAL RAILINGS O/H E REPAR SASH WINDOWS. RENEW CASEMENTS WITH CORRECT BATTERN / REGENCY GUAZENE BARS. FORM NOW SHUTTERS, SHUTTER BOXES, ARCHITRANES ETC. T. CORRECT REGENCY PATTERN TO DETAIL. SPEC. RENTER ON E.M.L. TO RETHL SPEC. RENTER CORNICES IN FIGHORS REV MASTER T. ANRENED REGENCY PATERNS TO DETATL. 1. F6889. CHINNEY ARMETS SHOWN RE-ETTABLISHED, DINING ROOM DOOR & WALL REVISED. CONSERVATORY REMOVE DEFECTIVE WALL RUASTOR AND DADO RAILS, REFLASTER TO APPROVED SPEC. REMOVED. VELOX ROPAGETS CHANGED TO TRADITIONAL PATTORN. HOIST ADDED. BADEMENT STATIC SORGEN & HANDRAIL REJISED. DODE FWWDON NO'S ADDED. LONDON BOROUGH OF CAPT RENEW DOORS, ARCHITRAVES E SKURTINGS & CONRECT REGOSCY RATTORN TO DETAIL. PLANNING AND TRANSPORT DEPARTMENT 1 5FEB 1989 K-O/H & REVAIL METAL RAILINGS AND METAL STAIRCASE TO SASONEVT TAKD RECEIVED LONDON BOROUGH OF CAMDEN TOWN AND COUNTRY PLANNING ACTS 30 MAR 1988 REMOVE EX. CONCRETE PAUNIC RE UM PAULINE IN TORK STONE TO DETAIL PLANS APPROVED To UMUTS: CASE LOPY CLEAR OUT EXISTING VALUTS CARLY OUT BWK REPARS WSORT NEW R.C. LINTOLS HB 8 87 0400R1 New ROCK LINGLES New ROOKS & DOK FRAMEN FROUDE PERMENTERY VENTS. TAKE UN EXISTING FRAMES RELAY W CONJUNETRE WITTH d. J.M. TO DETAIL Kerr Parker Associates Architects 46 Cissbury Ring South, Woodside Park, London N12 7BE TEL. NO 01- 445-6970 134 High Street, Ponders End, Enfield EN3 4ET TEL. NO. 01 - 805 - 7400 CONTRACT 54 Cumberland Terrace AND 28 CUMBERLAND TERRACE MEWS DRAWING Basement-Ground-First Floors PLANS AS PROPOSED SCALE DATE Nov. 88 50 RENEW ALL DOOLS, FRAMES E ALCHTRANES TO COLLECT REGENCY RATTERN TO DETAIL RENEW SKIRTINGS W HARD PLASTER TO DETAIL DRAWN CHECKED DRAWING NO. K - 8824-6 A

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Appendix C

Context drawings



Existing Site Plan

SOURCES OF INFORMATION: COLLETT ZARZYCKI ARCHITECTS

55CT - GA - Gutter.dwg Received 07 October 2020

VuCity

High Detail 3d Map: 200171\_55\_Cumberland\_Terrace\_MASTER.dwg Received 10 June 2020

Key: Existing
Proposed 54 Cumberland Terrace

Initial HOLLIS SHALL BE INFORMED IN WRITING OF ANY DISCREPANCIES. ALL DIMENSIONS ARE IN METERS ONLY

TITLE

# **Existing Site Plan**

CLIENT

# Jonathon and Nathalie Esfandi

PROJECT

55 Cumberland Terrace & 29 Cumberland Mews London, NW1 4HJ

DRAWN BY	CHECKED
LT/OW	PL
SCALE	DATE
1:500@A3	October 2020

# HOLLIS

80-82 Silverthorne Road London SW8 3HE

- T 020 7622 9555 F 020 7627 9850 W hollisglobal.com

DRAWING NO. 87970\_CTXT\_01 RELEASE NO. 2



Proposed Site Plan

SOURCES OF INFORMATION: COLLETT ZARZYCKI ARCHITECTS

55CT - GA - Gutter.dwg Received 07 October 2020

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High Detail 3d Map: 200171\_55\_Cumberland\_Terrace\_MASTER.dwg Received 10 June 2020

Key: Existing
Proposed 54 Cumberland Terrace

Initial Date HOLLIS SHALL BE INFORMED IN WRITING OF ANY DISCREPANCIES. ALL DIMENSIONS ARE IN METERS ONLY

TITLE

# **Proposed Site Plan**

CLIENT

# Jonathon and Nathalie Esfandi

PROJECT

55 Cumberland Terrace & 29 Cumberland Mews London, NW1 4HJ

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SCALE	DATE
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DRAWING NO. 87970\_CTXT\_03 RELEASE NO. 2



3D Context View - View from North (Existing)



3D Context View - View from South (Existing)

SOURCES OF INFORMATION: COLLETT ZARZYCKI ARCHITECTS

55CT - GA - Gutter.dwg Received 07 October 2020 VuCity

High Detail 3d Map: 200171\_55\_Cumberland\_Terrace\_MASTER.dwg Received 10 June 2020



# ALL HEIGHTS IN METERS AOD



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TITLE

3D Views Existing Site

CLIENT

### Jonathon and Nathalie Esfandi

# PROJECT

55 Cumberland Terrace & 29 Cumberland Mews London, NW1 4HJ

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RELEASE NO.

87970\_CTXT\_02

2



3D Context View - View from North (Proposed)



3D Context View - View from South (Proposed)

SOURCES OF INFORMATION: COLLETT ZARZYCKI ARCHITECTS

55CT - GA - Gutter.dwg Received 07 October 2020 VuCity

High Detail 3d Map: 200171\_55\_Cumberland\_Terrace\_MASTER.dwg Received 10 June 2020



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TITLE

3D Views Proposed Site

CLIENT

Jonathon and Nathalie Esfandi

# PROJECT

55 Cumberland Terrace & 29 Cumberland Mews London, NW1 4HJ

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NTS	October 2020

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DRAWING NO. 87970\_CTXT\_04 ELEASE NO.



# Appendix D

# Window/room reference drawings





# 54 Cumberland Terrace, Lower Ground Floor



3D Context View - North Facing Elevation





3D Context View - Mews Building

### SOURCES OF INFORMATION: COLLETT ZARZYCKI ARCHITECTS

55CT - GA - Gutter.dwg Received 07 October 2020

VuCity

High Detail 3d Map: 200171\_55\_Cumberland\_Terrace\_MASTER.dwg Received 10 June 2020

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TITLE

**Daylight Distribution** Contours/Referencing Plans Property Address

CLIENT

Jonathon and Nathalie Esfandi

PROJECT

NTS	October 2020
SCALE	DATE
LT/OW	PL
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54 Cumberland Terrace, Ground Floor

![](_page_39_Picture_2.jpeg)

3D Context View - North Facing Elevation

![](_page_39_Figure_4.jpeg)

![](_page_39_Picture_5.jpeg)

3D Context View - Mews Building

55CT - GA - Gutter.dwg Received 07 October 2020 VuCity

SOURCES OF INFORMATION: COLLETT ZARZYCKI ARCHITECTS

High Detail 3d Map: 200171\_55\_Cumberland\_Terrace\_MASTER.dwg Received 10 June 2020

![](_page_39_Picture_9.jpeg)

TITLE

Daylight Distribution Contours/Referencing Plans Property Address

CLIENT

Jonathon and Nathalie Esfandi

PROJECT

NTS	October 2020	
SCALE	DATE	
LT/OW	PL	
DRAWN BY	CHECKED	

![](_page_39_Picture_18.jpeg)

![](_page_40_Picture_0.jpeg)

54 Cumberland Terrace - Rear of Main House and Link

![](_page_40_Picture_2.jpeg)

3D Context View - 54 Cumberland Terrace

![](_page_40_Picture_4.jpeg)

Plan View - 54 Cumberland Terrace

### SOURCES OF INFORMATION: COLLETT ZARZYCKI ARCHITECTS

55CT - GA - Gutter.dwg Received 07 October 2020

VuCity

High Detail 3d Map: 200171\_55\_Cumberland\_Terrace\_MASTER.dwg Received 10 June 2020

![](_page_40_Picture_11.jpeg)

TITLE

Window Referencing Diagrams 54 Cumberland Terrace and 28 Cumberland Terrace Mews

CLIENT

Jonathon and Nathalie Esfandi

### PROJECT

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SCALE	DATE
NTS	October 2020

![](_page_40_Picture_20.jpeg)

![](_page_40_Picture_21.jpeg)

![](_page_41_Figure_0.jpeg)

28 Cumberland Terrace Mews - Rear of Mews House and Link

![](_page_41_Picture_2.jpeg)

3D Context View - 54 Cumberland Terrace

![](_page_41_Picture_4.jpeg)

Plan View - 54 Cumberland Terrace

SOURCES OF INFORMATION: COLLETT ZARZYCKI ARCHITECTS

55CT - GA - Gutter.dwg Received 07 October 2020

VuCity

High Detail 3d Map: 200171\_55\_Cumberland\_Terrace\_MASTER.dwg Received 10 June 2020

![](_page_41_Picture_10.jpeg)

TITLE

Window Referencing Diagrams 54 Cumberland Terrace and 28 Cumberland Terrace Mews

CLIENT

Jonathon and Nathalie Esfandi

### PROJECT

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SCALE	DATE
NTS	October 2020

![](_page_41_Picture_19.jpeg)

![](_page_41_Picture_20.jpeg)