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DAYLIGHT & SUNLIGHT REPORT

35 Templewood Avenue
London, NW3 7UY

26th February 2020

Contents

1. Introduction	3
2. Guidance	4
3. Application of the guidance	6
4. Planning Policy Context.....	7
5. Sources of information & assumptions ...	9
6. The site and proposal.....	10
7. Assessment results.....	11
8. Conclusions	14

1. Introduction

- 1.1. eb7 have been instructed to assess the effect of proposed development at 35 Templewood Avenue, London on daylight and sunlight to the existing surrounding properties and neighbouring amenity spaces. These assessments consider the latest Lyndon Goode Architects' scheme proposals received 21st February 2020.
- 1.2. The methodology and criteria used for these assessments is provided by the Building Research Establishment's (BRE) guidance 'Site layout planning for daylight and sunlight: A guide to good practice' (BRE 209 2nd edition, 2011).
- 1.3. In order to carry out the assessments, we have generated a 3D computer model (test environment) of the existing site, the key surrounding properties and the proposed scheme. Using this model and our specialist software, we have calculated the daylight and sunlight levels in both the existing and proposed conditions for the relevant neighbouring buildings.
- 1.4. The numerical criteria suggested within the BRE guidelines has been applied to each of the assessments mentioned above. It is important to note that these guidelines are not a rigid set of rules, but are advisory and need to be applied flexibly according to the specific context of a site.
- 1.5. The calculations for the overshadowing effects to neighbouring amenity areas and gardens have not been included. Due to their position and size in relation to the proposal they would continue to receive the BRE recommended guidance of at least 2 hours of sunlight during the day.

2. Guidance

Daylight & sunlight for planning

'Site layout planning for daylight and sunlight: A guide to good practice', BRE 2011

- 2.1. The Building Research Establishment (BRE) Report 209, *'Site layout planning for daylight and sunlight: A guide to good practice'*, is the reference document used by most local authorities for assessing daylight and sunlight in relation to new developments. Commonly referred to as 'the BRE guidelines', it provides various testing methodologies to calculate the potential light levels received by neighbours of a development site and provided within proposed new development.

Detailed daylight assessments

- 2.2. The guidance outline three detailed methods for calculating daylight: the Vertical Sky Component (VSC), the No-Sky Line (NSL) and the Average Daylight Factor (ADF).
- 2.3. The VSC and NSL are primarily used for the assessment of existing buildings, while the ADF test is generally recommended for proposed rather than existing dwellings. The ADF may sometimes be useful as a supplementary analysis for existing buildings, particularly newer ones, and a number of local authorities request this as a standard measurement for impact assessments. It can help in judging whether an impact on daylight, which might otherwise be deemed 'noticeable', is nonetheless acceptable, when considered in the broader town planning context.
- 2.4. The VSC test measures the amount of sky that is visible to a specific point on the outside of a property, which is directly related to the amount of daylight that can be received. It is measured on the outside face of the external walls, usually at the centre point of a window.
- 2.5. The NSL test calculates the distribution of daylight within rooms by determining the area of the room at desk / work surface height (the 'working plane') which can and cannot receive a direct view of the sky and hence 'sky light'. The working plane height is set at 850mm above floor level within residential property.
- 2.6. For the above methods, the guidance suggests that existing daylight may be noticeably affected by new development if: -
 - Windows achieve a VSC below 27% and are reduced to less than 0.8 times their former value; and
 - Levels of NSL within rooms are reduced to less than 0.8 times their former values.

- 2.7. Where rooms are greater than 5m in depth and lit from only one side, the guidance recognises that *"a greater movement of the no sky line may be unavoidable"* (page 8, paragraph 2.2.10).

Daylight to new buildings

- 2.8. The ADF method calculates the average illuminance within a room as a proportion of the illuminance available to an unobstructed point outdoors under a sky of known

luminance and luminance distribution. This is the most detailed of the daylight calculations and considers the physical nature of the room behind the window, including; window transmittance, and surface reflectivity. The BRE guidance and British Standard sets the following recommended ADF levels for habitable room uses: -

- Bedrooms – 1% ADF
- Living Rooms – 1.5% ADF
- Kitchens – 2% ADF

Detailed sunlight assessments

- 2.9. For sunlight, the Annual Probable Sunlight Hours (APSH) test calculates the percentage of probable hours of sunlight received by a window or room over the course of a year.
- 2.10. In assessing sunlight effects to existing properties surrounding a new development, only those windows orientated within 90° of due south and which overlook the site require assessment. The main focus is on living rooms, with bedrooms and kitchens deemed less important.
- 2.11. The guidelines suggest that the main living rooms within new buildings should achieve at least 25% of annual sunlight hours, with 5% during the winter period. For neighbouring buildings, the guide suggests that occupiers will notice the loss of sunlight if the APSH to main living rooms is both less than 25% annually (with 5% during winter) and that the amount of sunlight, following the proposed development, is reduced by more than 4%, to less than 0.8 times its former value.

3. Application of the guidance

Scope of assessment

Impact analysis for neighbouring buildings

- 3.1. The BRE guidelines advise that, when assessing any potential effects on surrounding properties, only those windows and rooms that have a 'reasonable expectation' of daylight and sunlight need to be considered. At paragraph 2.2.2 it states: -

"The guidelines given here are intended for use for rooms in adjoining dwellings where daylight is required, including living rooms, kitchens and bedrooms. Windows to bathrooms, toilets, storerooms, circulation areas and garages need not be analysed."

- 3.2. Our assessments therefore consider the neighbouring residential properties only, which the BRE recognises have the highest expectation for natural light. We have tested the impact on the main rooms in each residential property and ignored non-habitable space (e.g. staircases, hallways, bathrooms, toilets, stores etc.) as per BRE guidance.

Application of the numerical criteria

- 3.3. The opening paragraphs of the BRE guidelines state:

"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".

- 3.4. It is therefore very important to apply the BRE guidance sensibly and flexibly, with careful consideration of the specific site context. Its numerical targets theoretically apply to any built environment, from city centres to rural villages. However, in more tightly constrained environments, achieving the default BRE targets can be very challenging and conflict with other beneficial factors of site layout design.
- 3.5. With the above in mind, rigid adherence to the BRE in certain situations could easily result in an inappropriate form of development. In which case it may be appropriate to adopt lower target values more appropriate to the location concerned. This is acknowledged in the BRE guidance at paragraph 2.2.3 (page 7):

"Note that numerical values given here are purely advisory. Different criteria maybe used, based on the requirements for daylighting in an area viewed against other site layout constraints."

4. Planning Policy Context

- 4.1. We have considered local, regional and national planning policy relating to daylight and sunlight. In general terms, planning policy advises that new development will only be permitted where it is shown not to cause unacceptable loss of daylight or sunlight amenity to neighbouring properties.
- 4.2. The need to protect the amenity of neighbours is echoed within recent publications from the Mayor of London and the Secretary of State for Housing, Communities and Local Government. Although, these documents also stress that current guidance needs to be used flexibly where developments are located in urban areas and intend to achieve higher densities. Specifically, these documents suggest that the nationally applicable criteria given within the BRE guidance needs to be applied carefully and in consideration of the development's context.

The National Planning Policy Framework - Department for Housing, Communities and Local Government (Feb 2019)

- 4.1. The DCLG have produced a revised National Planning Policy Framework document (2019) which includes the following: -

11. Making effective use of land

Achieving appropriate densities

"123. Where there is an existing or anticipated shortage of land for meeting identified housing needs, it is especially important that planning policies and decisions avoid homes being built at low densities, and ensure that developments make optimal use of the potential of each site. In these circumstances: -

c) local planning authorities should refuse applications which they consider fail to make efficient use of land, taking into account the policies in this Framework. In this context, when considering applications for housing, authorities should take a flexible approach in applying policies or guidance relating to daylight and sunlight, where they would otherwise inhibit making efficient use of a site."

The Draft New London Plan – The Mayor of London (December 2019)

- 4.2. The final version is to be published in March 2020. The Mayor of London's Draft New London Plan gives the following: -

Policy D4 Housing quality and standards

"E Housing development should maximise the provision of dual aspect dwellings and normally avoid the provision of single aspect dwellings. A single aspect dwelling should only be provided where it is considered a more appropriate design solution to meet the requirements of Policy D1 London's form and characteristics than a dual aspect dwelling and it can be demonstrated that it will have adequate passive ventilation, daylight and privacy, and avoid overheating."

"F The design of development should provide sufficient daylight and sunlight to new and surrounding housing that is appropriate for its context, whilst avoiding

overheating, minimising overshadowing and maximising the usability of outside amenity space."

The Housing SPG – The Mayor of London (March 2016)

Standards for privacy, daylight and sunlight

"1.3.45 Policy 7.6Bd requires new development to avoid causing 'unacceptable harm' to the amenity of surrounding land and buildings, particularly in relation to privacy and overshadowing and where tall buildings are proposed. An appropriate degree of flexibility needs to be applied when using BRE guidelines to assess the daylight and sunlight impacts of new development on surrounding properties, as well as within new developments themselves. Guidelines should be applied sensitively to higher density development, especially in opportunity areas, town centres, large sites and accessible locations, where BRE advice suggests considering the use of alternative targets. This should take into account local circumstances; the need to optimise housing capacity; and scope for the character and form of an area to change over time.

1.3.46 The degree of harm on adjacent properties and the daylight targets within a proposed scheme should be assessed drawing on broadly comparable residential typologies within the area and of a similar nature across London. Decision makers should recognise that fully optimising housing potential on large sites may necessitate standards which depart from those presently experienced, but which still achieve satisfactory levels of residential amenity and avoid unacceptable harm."

5. Sources of information & assumptions

- 5.1. We have used a 3D model received from the architects, alongside the site photographs and Ordnance Survey information, to create a 3D computer model of the proposed development in the context of the existing site and surrounding buildings. Where survey information was unavailable, the position of the neighbouring property elevations has been estimated based upon brick counts from site photographs. Window positions and dimensions directly affect the results of all assessment methods.
- 5.2. We have not sought access to the surrounding properties and, unless we have been able to source floor layouts via public records, the internal configuration and floor levels have been estimated. Unless the building form dictates otherwise, we assume room depths of c. 4.2m for principal living space. Room layouts used directly affect the results of the NSC assessment.
- 5.3. Where possible neighbouring building use has been identified via online research, including Valuation Office Agency (VOA) searches, and/or external observation.
- 5.4. The full list of sources of information used in this assessment is as follows: -

Lyndon Goode Architects

3D model of the proposed development, existing and surrounding buildings

TAV-WIP_Model.dwg

Received 07/01/2020

TAV-LGA-ZA-00-DR-A- 0100 - Location Plan

TAV-LGA-ZA-ZZ-DR-A-Existing Drawing Set

TAV-LGA-ZA-ZZ-DR-A-Proposed Drawing Set

Received 26/02/20

6. The site and proposal

- 6.1. The development site is situated at 35 Templewood Avenue, Hampstead. It is currently occupied by a detached house. The proposed development involves partial re-development and partial retention of the existing dwelling house. Our computer modelling of the proposed scheme is shown in the image below and in more detail within our drawings at Appendix 1.
- 6.2. Our assessment has considered all of the closest neighbouring residential properties with windows overlooking the proposed development. These are shown on the following image: -

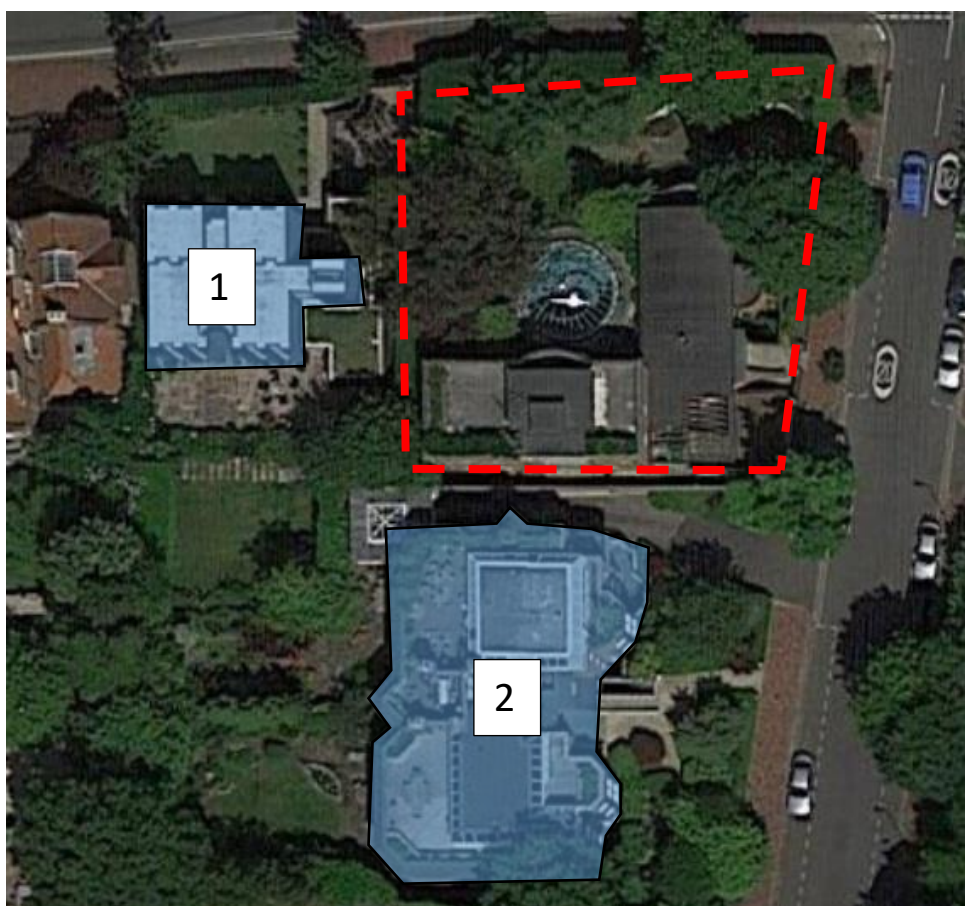


Image 1 - Site and neighbouring properties assessed

1. Schreiber House, 9 West Heath Road, London, NW3 7UX
2. Temple Heath Lodge, 33 Templewood Avenue, London, NW3 7UY

7. Assessment results

- 7.1. Full results of the daylight and sunlight assessments are attached within Appendix 2. Drawings to show the existing and proposed buildings in the context of the neighbouring properties as well as window maps showing individual window references are attached within Appendix 1.

Schreiber House, 9 West Heath Road



- 7.2. This is a three-storey detached house adjacent and to the west of the site. The property has been modelled using plans available through the local planning portal (REF: LWX0302034).
- 7.3. The image above confirms that there are no windows directly facing the development site. The windows on the rear elevation would have a very oblique view of the site and for all practical purposes have not been necessary to include as part of this report.

Temple Heath Lodge, 33 Templewood Avenue



- 7.4. This is a three-storey detached block of residential apartments located directly to the south of the site. The internal layout of the property has been modelled using a combination of different plans obtained through the local planning portal.
- 7.5. It has a number of windows on the flank elevation that provide a direct view of the proposal. The room sizes are based on layouts obtained from the local planning portal (REF:PL/9100290 & 2018/4874/P) alongside reasonable assumptions from the exterior fenestration.
- 7.6. There is also a separate building to the rear which we understand is a conservatory and has been considered in our assessment.
- 7.7. The roof extension to this property has recently been approved for renovation works however due to the significant amount of glazing at this level, it is reasonable to assume that the windows would continue to receive a more than adequate amount of daylight and sunlight and have been excluded from the results table.

Daylight

- 7.8. The results of our VSC assessment have shown that eight of the ten windows assessed will retain levels of daylight above the standard BRE target (either 27% VSC or 0.8 times the former value). The two windows that fall below these targets are ground floor windows W2 and W3, which can be seen on the attached drawing 4055-05.
- 7.9. Window W2 on the flank elevation is a secondary window and serves a study, it is mitigated by a glazed door to a balcony on the front elevation. Whilst the window receives a reduction to 0.6 times its former value (below the 0.8 target), the further NSC results for the study show that there will be no impact at all to the distribution of

light within the room. This suggests that the impact to daylight within this room will not be noticeable to occupants.

- 7.10. Similarly, Window W3 is the smaller, secondary window to a kitchen at the rear of the property, which is mitigated by a larger window overlooking the rear garden. Whilst this window receives a reduction to 0.7 times its former value (below the 0.8 target), the further NSC results for the kitchen show that there will be no impact at all to the distribution of light within the room. This suggests that the impact to daylight within this room will not be noticeable to occupants.

Sunlight

- 7.11. The BRE guidance suggests that windows which face within 90 degrees of due north will have little expectation of sunlight and need not be analysed. As the proposed development is located directly north of this property, there will not be a material effect on sunlight and the development is fully consistent with BRE guidance.

8. Conclusions

- 8.1. This practice has undertaken a detailed assessment of the potential daylight and sunlight effects of the proposed development at 35 Templewood Avenue on the key neighbouring properties.
- 8.2. Our assessments have been undertaken using the VSC, NSL, (daylight) and APSH (sunlight) tests set out within the BRE guidance 'Site layout planning for daylight and sunlight: A guide to good practice' (2011). It is important to reiterate that alterations in daylight and sunlight to adjoining properties are often inevitable when undertaking any meaningful development, especially in an urban environment. Therefore, the BRE guide is meant to be interpreted flexibly because natural lighting is only one of many factors in site layout design. Indeed, the guidelines suggest that different criteria may be used based upon the requirements for natural lighting in an area viewed against other constraints.
- 8.3. The daylight results have shown that, whilst there will be minor VSC reductions to two windows in the flank elevation of Temple Heath Lodge, it is unlikely that these impacts will have a material effect upon the property. The sunlight results show full compliance with BRE targets. As such, the proposed development is considered to be consistent with BRE guidance and local planning policy.



Appendix 1

Drawings of the existing, proposed and surrounding buildings



Sources of information

Architect
TAV-LGA-ZA-00-DR-A- 0100 - Location
Plan
TAV-LGA-ZA-ZZ-DR-A-Existing Drawing
Set
TAV-LGA-ZA-ZZ-DR-A-Proposed Drawing
Set

Recieved 21/02/20

EB7 Ltd
Site Photographs
Ordnance Survey

Key:

- Existing
- Proposed



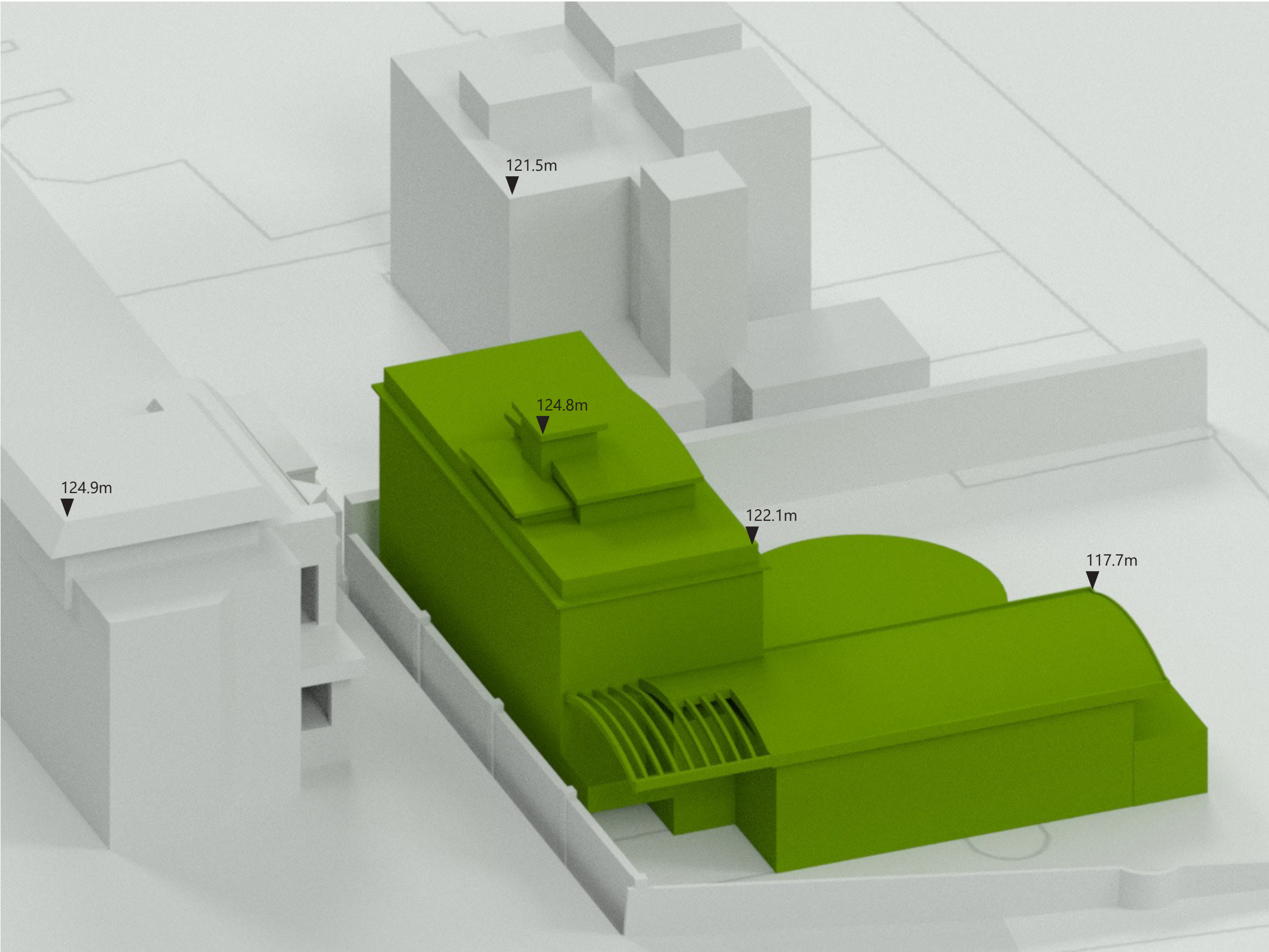
Project 35 Templewood Av,
London
NW3 7UY

Title Existing Condition
Plan View

Drawn	HA	Checked	IT
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Date	30/01/2020	Project	4055
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Rel no.	Prefix	Page no.
01	DS01	01



Sources of information

Architect
TAV-LGA-ZA-00-DR-A- 0100 - Location
Plan
TAV-LGA-ZA-ZZ-DR-A-Existing Drawing
Set
TAV-LGA-ZA-ZZ-DR-A-Proposed Drawing
Set

Recieved 21/02/20

EB7 Ltd
Site Photographs
Ordnance Survey

Key:

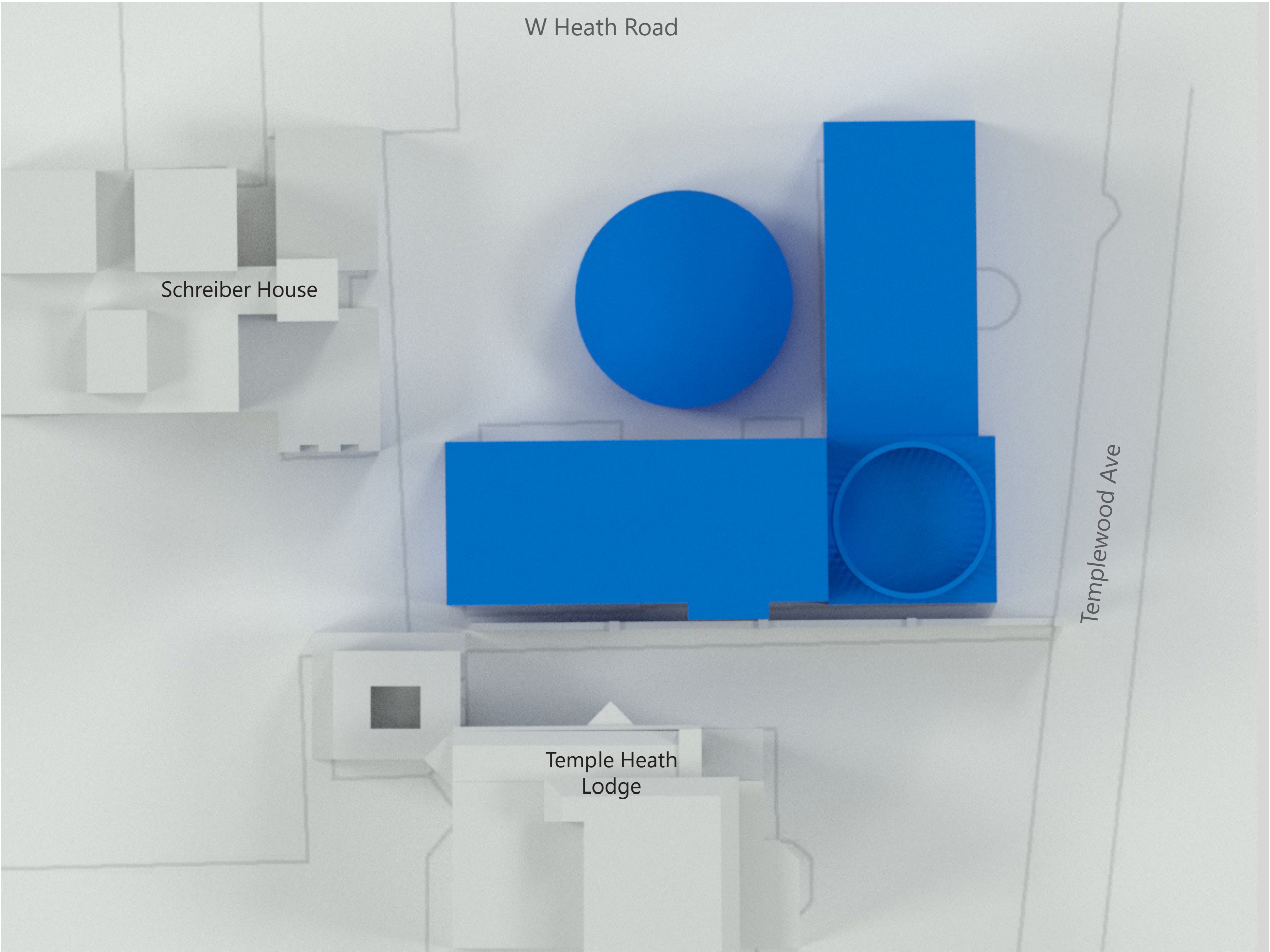
- Existing
- Proposed

Notes:
All heights and dimensions are in AOD

Project 35 Templewood Av,
London
NW3 7UY

Title Existing Condition
3D View

Drawn	HA	Checked	IT
Date	30/01/2020	Project	4055
Rel no.	Prefix	Page no.	
01	DS01	02	



Sources of information

Architect
TAV-LGA-ZA-00-DR-A- 0100 - Location
Plan
TAV-LGA-ZA-ZZ-DR-A-Existing Drawing
Set
TAV-LGA-ZA-ZZ-DR-A-Proposed Drawing
Set

Recieved 21/02/20

EB7 Ltd
Site Photographs
Ordnance Survey

Key:

- Existing
Proposed



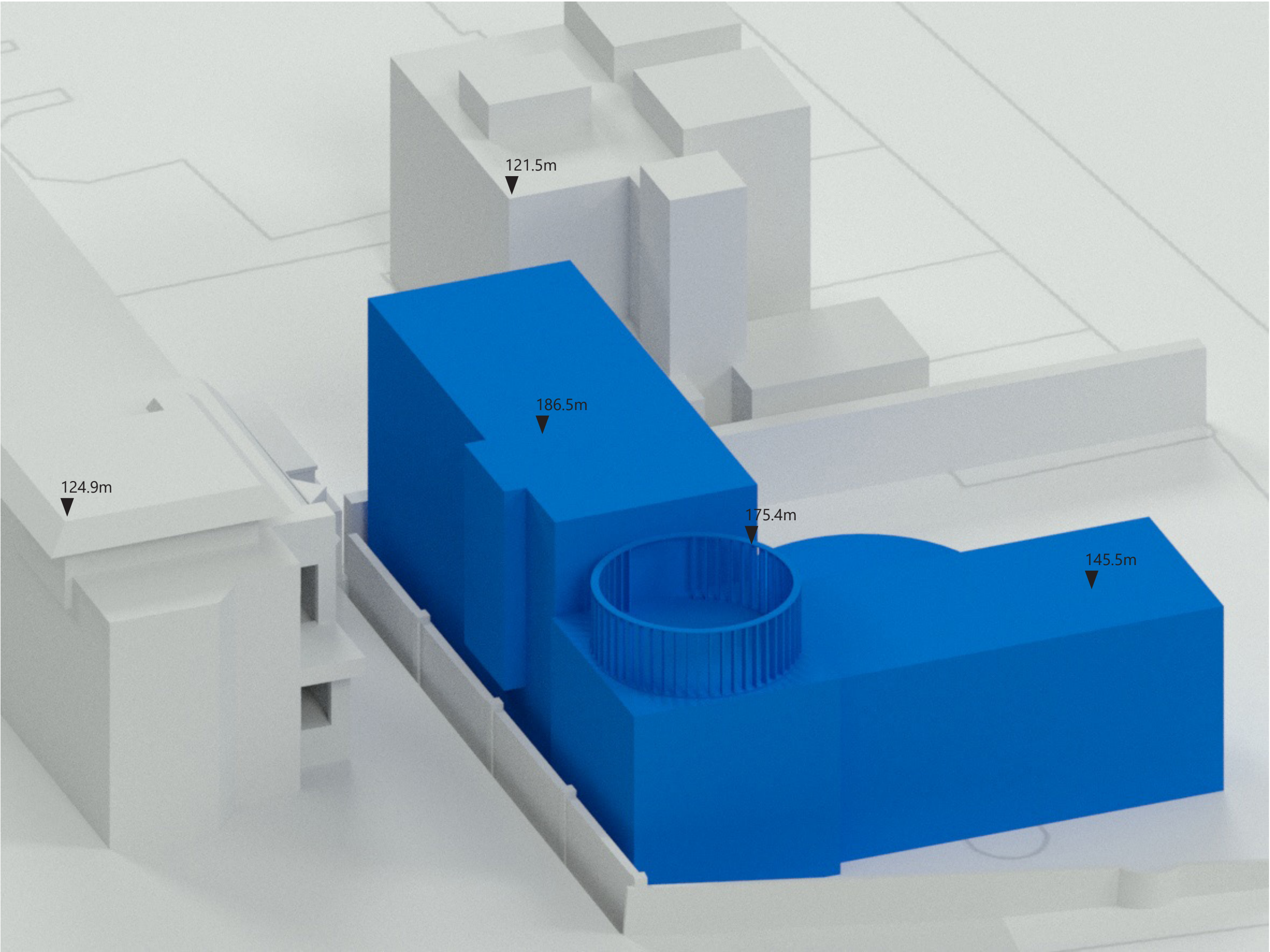
Project 35 Templewood Av,
London
NW3 7UY

Title Proposed Development
Plan View

Drawn HA Checked IT

Date 30/01/2020 Project 4055

Rel no. 01 Prefix DS01 Page no. 03



Sources of information

Architect
TAV-LGA-ZA-00-DR-A- 0100 - Location Plan
TAV-LGA-ZA-ZZ-DR-A-Existing Drawing Set
TAV-LGA-ZA-ZZ-DR-A-Proposed Drawing Set

Recieved 21/02/20

EB7 Ltd
Site Photographs
Ordnance Survey

Key:

- Existing
- Proposed

Notes:
All heights and dimensions are in AOD

Project 35 Templewood Av,
London
NW3 7UY

Title Proposed Development
3D View

Drawn	HA	Checked	IT
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Date	30/01/2020	Project	4055
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Rel no.	Prefix	Page no.
01	DS01	04



Sources of information

Architect
TAV-LGA-ZA-00-DR-A- 0100 - Location
Plan
TAV-LGA-ZA-ZZ-DR-A-Existing Drawing
Set
TAV-LGA-ZA-ZZ-DR-A-Proposed Drawing
Set

Recieved 21/02/20

EB7 Ltd
Site Photographs
Ordnance Survey

Key:

- Existing
- Proposed

Notes:
All heights and dimensions are in AOD

Project	35 Templewood Av, London NW3 7UY		
Title	Proposed Development Window Map: Temple Heath Lodge		
Drawn	HA	Checked	IT
Date	30/01/2020	Project	4055
Rel no.	01	Prefix	DS01
		Page no.	05



Appendix 2

Results of the daylight and sunlight assessments
within neighbouring properties

