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DAYLIGHT & SUNLIGHT REPORT

104 Hawtrey Road
Camden
NW3 3NN

1st April 2021

Contents

1. Introduction

1.1. eb7 have been instructed to assess the effect of the proposed rear extension at 104 Hawtrey Road on the daylight and sunlight to the nearby neighbouring residential properties at Hawtrey Road, Lyttleton Close and Adelaide Road. These assessments consider the March 2021 Place 54 Architects scheme.

1.2. The methodology and criteria used for these assessments is provided by 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 an assessment, we have generated a 3D computer model of the existing site, the key surrounding properties and the proposed roof extension. Using this model and our specialist software, we have calculated the daylight and sunlight levels in both the pre-existing and proposed conditions for the relevant neighbouring building.

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.

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 outlines 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).

Detailed sunlight assessments

2.8. 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.

2.9. 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.

2.10. 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 challenging and conflict with other beneficial factors of site layout design.

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. 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 London Plan – The Mayor of London (March 2021)

4.3. The London Plan 2021, states the following: -

Policy D6 Housing quality and standards

"C 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 Part B in Policy D3 Optimising site capacity through the design-led approach than a dual aspect dwelling, and it can be demonstrated that it will have adequate passive ventilation, daylight and privacy, and avoid overheating."

"D 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.""

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

4.4. The DCLG have produced a 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."

5. Sources of information & assumptions

5.1. Place 54 Architects existing survey and proposed drawings, as well as site photos have been used to create a 3D computer model of the proposal in the context of the existing site and surrounding buildings.

5.2. The position and size of the neighbouring elevations have been informed by a combination of planning drawings and site photographs. Window positions and dimensions used directly affect the results of all assessment methods.

5.3. The adjoining neighbouring dwelling at 102 Hawtrey Road has been modelled using a combination of existing survey drawings and planning drawings. The nearby neighbouring properties at 106 Hawtrey Road, 3 Lyttelton Close and 177 Adelaide Road have been modelled using a combination of ordinance survey provided with AOD heights, aerial AOD heights and external site photographs.

5.4. The full list of the source information used in this assessment is as follows:

Place 54 Architects

Drawings

3026 - 104 Hawtrey Road, NW3 3SS (Issue Drawing 2021.03.16)
Site photos
Received 16/03/2021
21003 104 Hawtrey Road_PLANNING_240321_ZIP
Site photos
Received 24/03/2021

6. The site and proposal

6.1. The development site is occupied by a 3-storey, post-war end-terrace property with a single storey rear extension, bound by Hawtrey Road to the west, Adelaide Road to the north and Lyttelton Close to the south east.

6.2. The proposal comprises a single storey roof extension at third floor level.

6.3. The proposed roof extension responds to the neighbouring elevations by limiting its height to 2.85m, in keeping with the local area by remaining subservient in height to the nearby four storey neighbouring dwellings at 179 and 181 Adelaide Road. This will maintain daylight and sunlight levels to the nearby residential properties.

6.4. Our computer modelling of the proposed scheme is shown in the image below and in more detail within our drawings at Appendix 1.

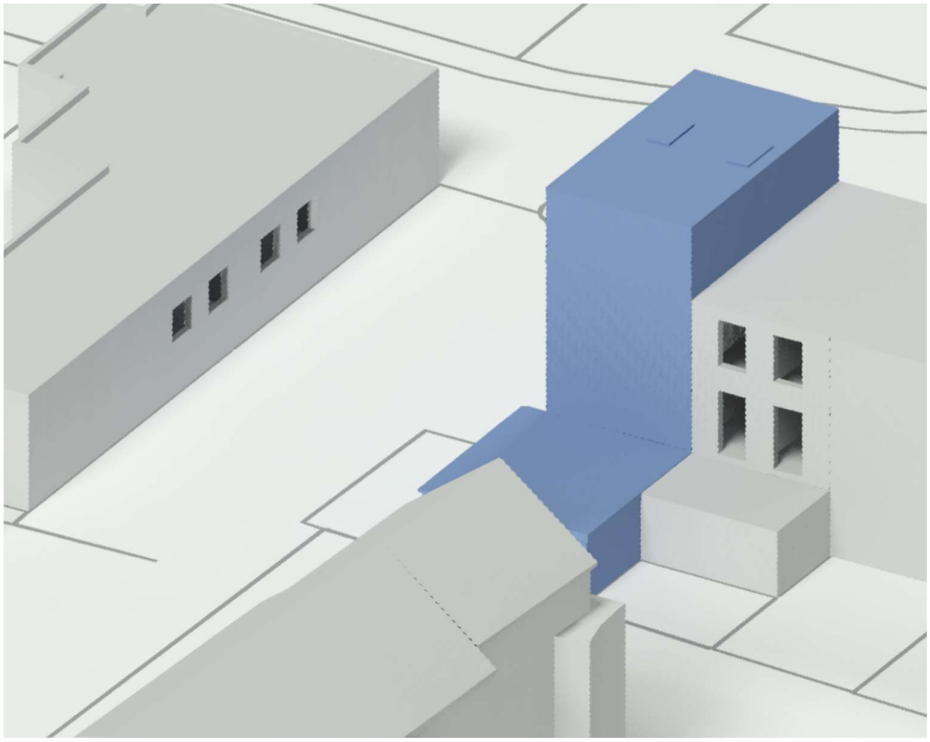

Image 1 – 3D view of the proposed development

7. Assessment results

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 are attached within Appendix 1.

The position of these neighbours is illustrated in the image below:

Image 2 – Existing site and neighbouring property assessed

Daylight and sunlight to neighbouring building

102 Hawtrey Road

Image 3 – 102 Hawtrey Roader Street, east facing elevation

7.1. This adjoining neighbour is a 3-storey post war dwelling located immediately to the north of the site, with a single storey extension to the rear. The east facing windows on the rear elevation will not have a view of the scheme such that they will maintain an open outlook, however they have been included within our technical assessment to ensure amenity levels remain unaffected.

7.2. Drawings obtained from the local planning authority (LPA Ref: 2015/6347/P) have been used to inform the modelling of this neighbours internal arrangement.

Daylight

7.3. The results from our Vertical Sky Component (VSC) and No Sky Contour (NSC) assessments demonstrate no impact to the neighbouring windows and rooms as a result of the proposal. All retained levels remain unchanged from the existing values and therefore are fully compliant with the BRE guidelines.

Sunlight

7.4. In terms of sunlight, the windows to the rear of 102 Hawtrey Road are not within 90 degrees of due south and therefore are not relevant for an APSH assessment under the BRE criteria.

3 Lyttelton Close and 106 Hawtrey Road

Image 4 – 3 Lyttelton Close and 106 Hawtrey Road, north facing elevation

7.5. These two storey residential properties are situated to the south of the site, bound by Hawtrey Road to the west and Lyttleton Close to the east. There are a number of windows on the north facing elevation that will have a view of the proposed roof extension. The internal arrangement used in our analysis has been based upon assumed layouts.

Daylight

7.6. The results from our VSC and NSC analysis show limited effects to the windows and rooms across both neighbouring properties following completion of the proposed roof extension. All retained levels remain within 0.8 times the existing values and therefore are fully compliant with the BRE targets.

Sunlight

7.7. The neighbouring elevation that looks towards the existing building is broadly north facing and therefore not relevant for a sunlight assessment under the BRE guidance.

177 (Flat A-D) Adelaide Road

Image 5 – 106 Hawtrey Road and 3 Lyttelton Close, north facing elevation

7.8. This four storey purpose built block of flats is located to the east of the site and set back to the south from Adelaide Road. There are a number of windows across all floor levels on the west facing flank elevation.

7.9. The internal arrangement of this neighbouring property has been based on assumed layouts. It is clear from the external appearance that two windows serve the stairwell. These are non-habitable spaces and are therefore not relevant for assessment as stated in the BRE guidance.

Daylight

7.10. There is good separation between the existing building and this neighbouring block such that both the VSC and NSC results show no material effect to all windows and rooms. All levels remain well within 0.8 times their former and fully comply with the BRE targets.

Sunlight

7.11. Our APSH study show that all windows included within our assessment within 90 degrees due south, retain excellent levels of direct sunlight with minimal reductions resulting from the proposed roof extension. All windows significantly exceed the BRE criteria of 25% APSH with at least 5% during the winter months.

8. Conclusions

8.1. This practice has undertaken a detailed assessment of the potential daylight and sunlight effects of the proposed third floor roof extension at 104 Hawtrey Road, upon the nearby residential neighbouring properties.

Daylight and sunlight impact to neighbouring properties

8.2. Our assessments have been undertaken using the VSC, NSC (daylight) and APSH (sunlight) tests set out within the BRE guidance *'Site layout planning for daylight and sunlight: A guide to good practice'* (2011).

8.3. The Vertical Sky Component (VSC) and No-Sky Contour (NSC) results show that the daylight effects are fully compliant with the BRE guidelines and there is no material impact on the amenity of the nearby neighbouring properties.

8.4. With regards to APSH, the neighbouring windows within 90 degrees of due south will retain excellent levels of sunlight that significantly exceed the BRE criteria for sunlight.

8.5. When considering the proposed roof extension against the existing building at 104 Hawtrey Road our assessments show that there will be no material change in amenity levels by reference to the BRE guidelines. As such the proposal is considered to fully meet local and regional planning policy in respect of daylight and sunlight levels.

Appendix 1

Drawings of the existing, proposed and surrounding buildings

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Sources of information

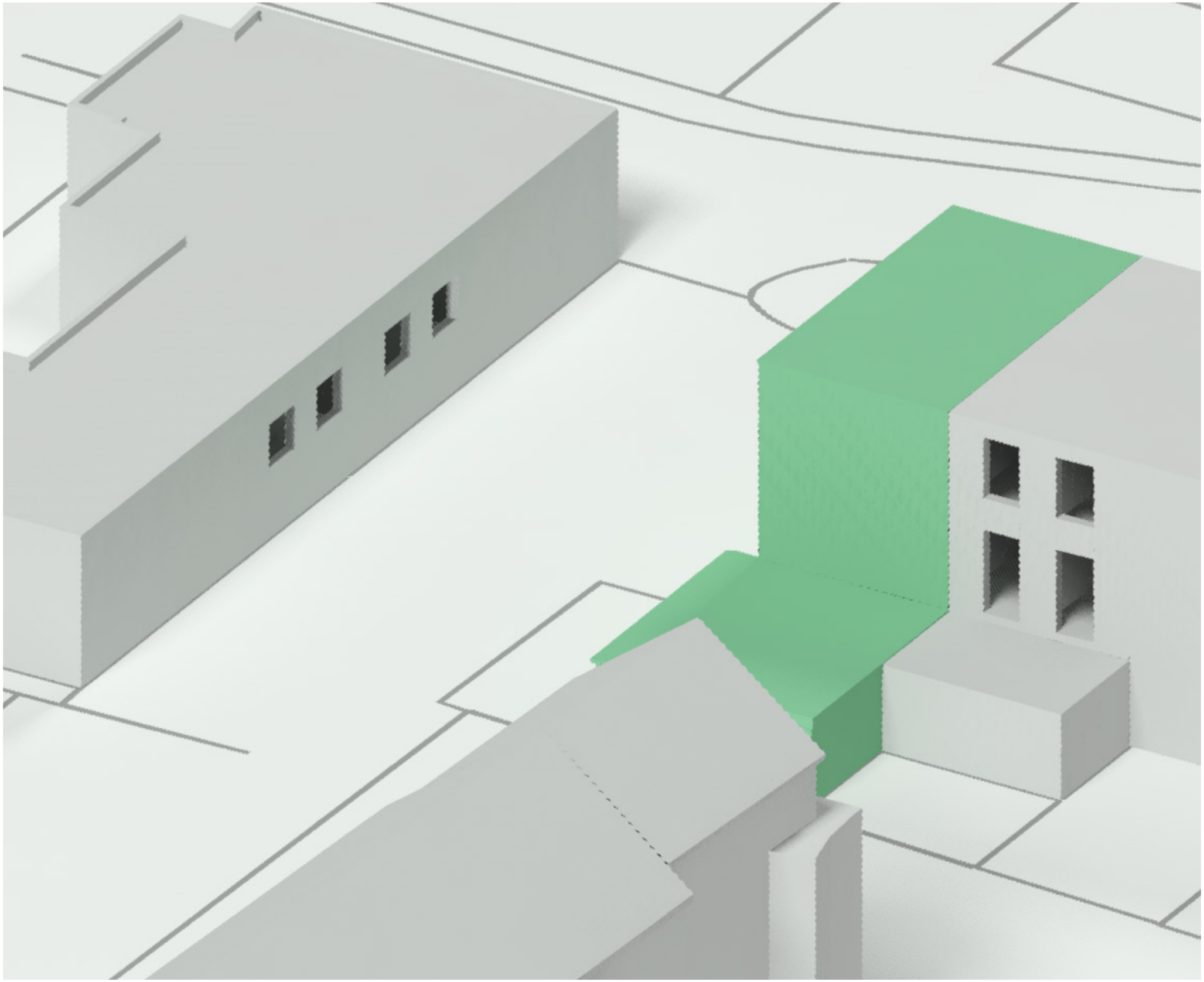
Place 54 Architects
3026 - 104 Hawtrey Road, NW3 3SS (Issue Drawing 2021.03.16)
Site photos
Received 16/03/2021
21003 104 Hawtrey Road_PLANNING_240321_ZIP
Site photos
Received 24/03/2021

Key:

Existing

NORTH

Project	104 Hawtrey Road, Camden
Title	Existing Condition Plan View
Drawn	BA
Checked	--
Date	01/04/2021
Project	4855
Rel no.	01
Prefix	DS01
Page no.	01



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Key:

Existing

Project	104 Hawtrey Road, Camden
Title	Existing Condition 3D View
Drawn	BA
Checked	--
Date	01/04/2021
Project	4855
Rel no.	01
Prefix	DS01
Page no.	02

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21003 104 Hawtrey Road_PLANNING_240321_ZIP
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Key:

Proposed

NORTH

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Drawn	BA
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Project	4855
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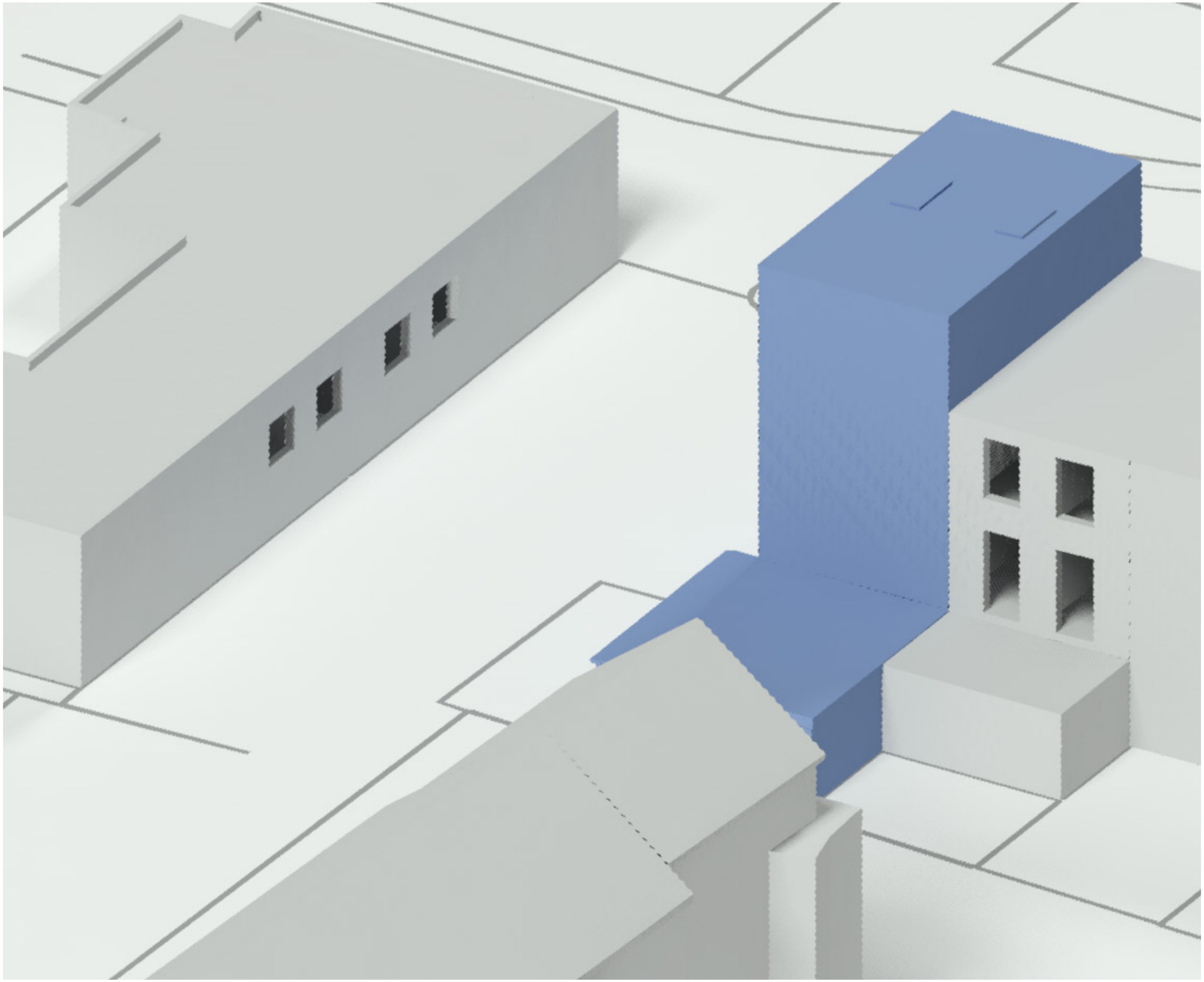

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Key:

Proposed

Project	104 Hawtrey Road, Camden
Title	Proposed Development 3D View

Drawn	BA	Checked	--
Date	01/04/2021	Project	4855

Rel no.	Prefix	Page no.
01	DS01	04

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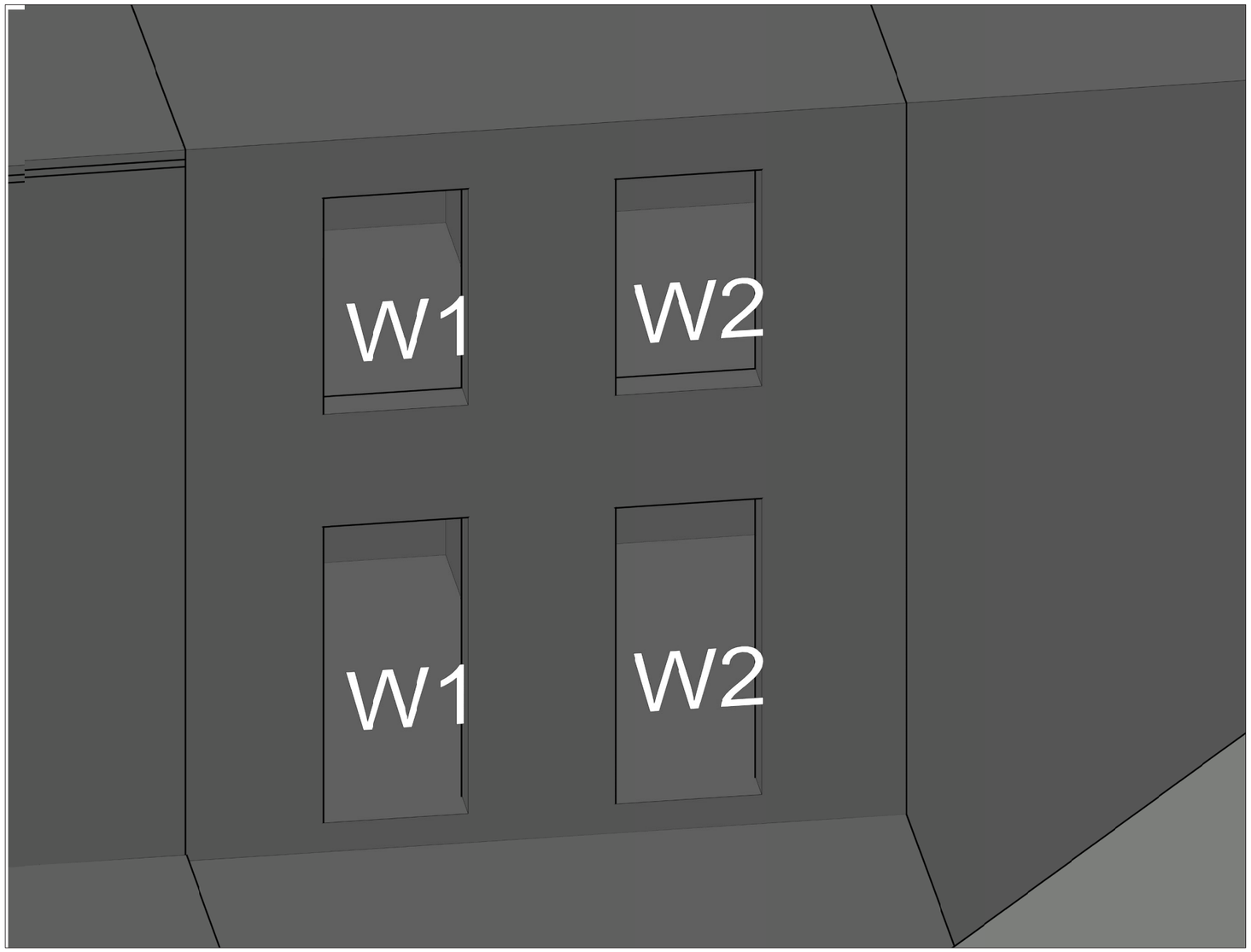

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21003 104 Hawtrey Road_PLAN-NING_240321_ZIP
Site photos
Ordnance Survey
Received 24/03/2021

Project	104 Hawtrey Road Camden, London NW3 3SS		
Title	102 Hawtrey Road Window Map		
Drawn	BA	Checked	--
Date	01/04/2021	Project	4855
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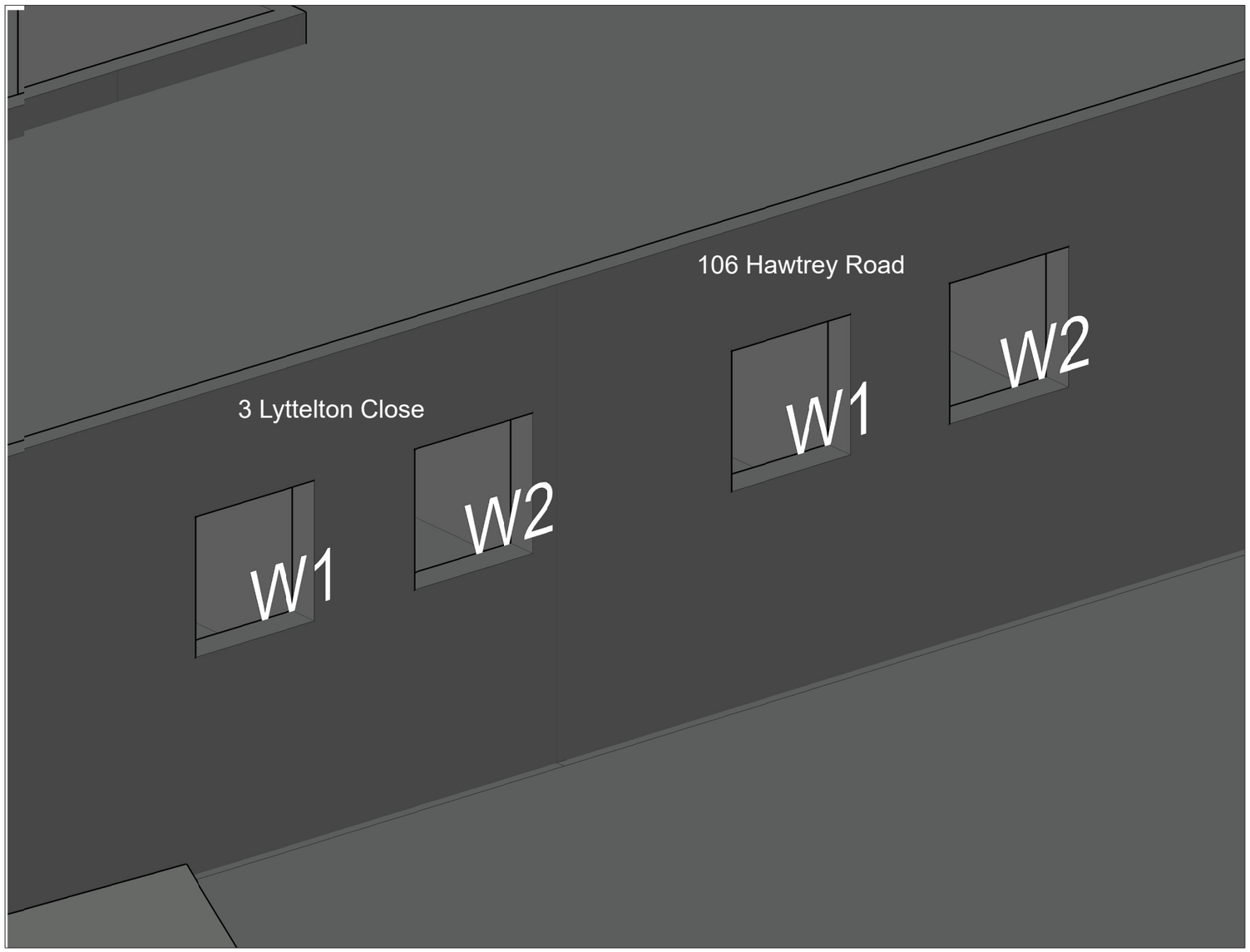

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Project	104 Hawtrey Road Camden, London NW3 3SS		
Title	3 Lyttelton Close and 106 Hawtrey Road Window Map		
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Date	01/04/2021	Project	4855
Rel no.	Prefix WM01	Page no.	02

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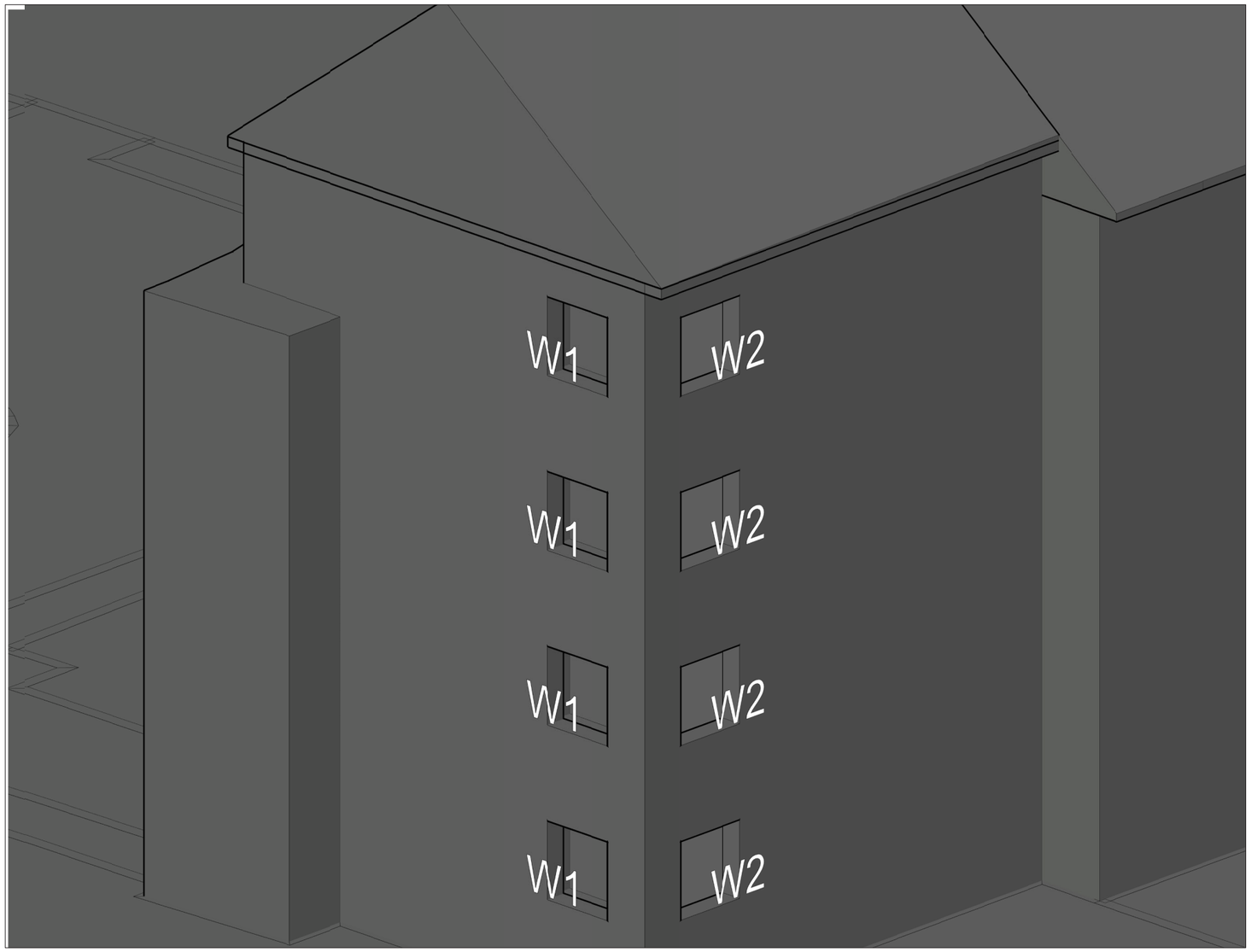

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Site photos
Ordnance Survey
Received 24/03/2021

Project	104 Hawtrey Road Camden, London NW3 3SS		
Title	177 (Flats A-D) Adelaide Road Window Map		
Drawn	BA	Checked	--
Date	01/04/2021	Project	4855
Rel no.	Prefix WM01	Page no.	03

Appendix 2

Daylight and sunlight results

Address	Room	Window	Room Use	Existing VSC	Proposed VSC	Loss	Proportion Retained	Room Area	Existing NSC	Proposed NSC	Loss	Proportion Retained	Existing APSH Total	Existing APSH Winter	Proposed APSH Total	Proposed APSH Winter	Total Retained	Winter Retained
102 Hawtrey Road																		
First	R1	W1-L	Residential	37.1	37.1	0.0	1.0											
		W1-U						120.5	118.9	118.9	0.0	1.0	N/F	N/F	N/F	N/F	N/F	N/F
First	R2	W2-L	Residential	37.2	37.2	0.0	1.0											
		W2-U						121.6	120.1	120.1	0.0	1.0	N/F	N/F	N/F	N/F	N/F	N/F
Second	R1	W1-L	Residential	38.3	38.3	0.0	1.0											
		W1-U						120.5	118.9	118.9	0.0	1.0	N/F	N/F	N/F	N/F	N/F	N/F
Second	R2	W2-L	Residential	38.3	38.3	0.0	1.0											
		W2-U						121.6	120.1	120.1	0.0	1.0	N/F	N/F	N/F	N/F	N/F	N/F
106 Hawtrey Road																		
First	R1	W1	Residential	32.9	30.7	2.2	0.9	101.2	100.0	94.5	5.5	0.9	N/F	N/F	N/F	N/F	N/F	N/F
First	R2	W2	Residential	33.0	30.9	2.1	0.9	101.2	99.5	93.4	6.1	0.9	N/F	N/F	N/F	N/F	N/F	N/F
3 Lyttelton Close																		
First	R1	W1	Residential	33.9	32.1	1.8	0.9	106.7	104.9	97.6	7.4	0.9	N/F	N/F	N/F	N/F	N/F	N/F
First	R2	W2	Residential	33.4	31.4	2.0	0.9	100.9	99.4	93.2	6.3	0.9	N/F	N/F	N/F	N/F	N/F	N/F
177A-D Adelaide Road																		
Ground	R1	W1	Residential	33.1	32.5	0.6	1.0											
		W2		37.3	37.2	0.1	1.0	74.7	74.6	74.6	0.0	1.0	89	28	88	28	1.0	1.0
First	R1	W1	Residential	35.8	35.2	0.6	1.0											
		W2		39.0	38.9	0.1	1.0	74.7	74.6	74.6	0.0	1.0	92	29	91	28	1.0	1.0
Second	R1	W1	Residential	37.9	37.4	0.6	1.0											
		W2		39.2	39.1	0.1	1.0	74.7	74.6	74.6	0.0	1.0	95	30	94	29	1.0	1.0
Third	R1	W1	Residential	39.3	38.9	0.4	1.0											
		W2		37.6	37.5	0.1	1.0	74.7	74.6	74.6	0.0	1.0	95	30	95	30	1.0	1.0