

# ABBEY ROAD PHASE THREE

Daylight and Sunlight Report

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- Appendix 3 Daylight and sunlight results for proposed dwellings
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# 1. Introduction

- 1.1. Delva Patman Redler LLP ("we") have been engaged by the Applicant to assess daylight and sunlight for a planning application for proposed development at Abbey Road ("the Site"). We have been instructed to assess the potential effects on neighbouring properties.
- 1.2. Our daylight and sunlight study has been carried out using the assessment methodology recommended in the Building Research Establishment (BRE) Report 209, 'Site Layout Planning for Daylight and Sunlight: A guide to good practice' (second edition, 2011) ("the BRE guide") and the Professional Guidance Note, 'Daylighting and sunlighting' (1st edition, 2012), published by the Royal Institution of Chartered Surveyors.
- 1.3. The Site is located within The London Borough of Camden. The Site is shown outlined in red in the aerial photograph in Figure 1 below and on the location plan in Appendix 2.



Figure 1 - Aerial photo of the Site and neighbouring buildings (© Google)

- 1.4. The proposed development is illustrated in spot-height drawings in Appendix 2. The proposals consist of the demolition and redevelopment of Emminster and Hinstock blocks including Belsize Priory Health Centre, Abbey Community Centre, public house and commercial units to provide new residential accommodation (Use Class C3) and ground floor commercial space (Use Class E/Sui Generis) to be used as flexible commercial units, across three buildings ranging from 4 to 11 storeys, along with car and bicycle parking, landscaping and all necessary ancillary and enabling works
- 1.5. This report is accompanied by Appendices explaining the BRE assessment methodology and containing drawings and tabulated results, as listed on the Contents page.



# 2. Planning policy and guidance

#### **National Planning Policy and Guidance**

# National Planning Policy Framework (July 2021)

- 2.1. The National Planning Policy Framework (NPPF) sets out the Government's planning policies and how these should be applied. It provides a framework within which locally prepared plans for housing and other development can be produced. It places an emphasis on sustainable development and delivery of housing.
- 2.2. Chapter 11 of the NPPF, entitled "Making effective use of land", promotes the effective use of land in meeting the need for homes and other uses. It gives examples such as developing under-utilised land and buildings, especially if this would help to meet identified needs for housing where land supply is constrained and available sites could be used more effectively, and upward extensions to create new homes, where they would be consistent with the prevailing height and form of neighbouring properties and the overall street scene.

#### 2.3. In particular, paragraph 125 of the NPPF states:

Area-based character assessments, design guides and codes and masterplans can be used to help ensure that land is used efficiently while also creating beautiful and sustainable places. 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 (as long as the resulting scheme would provide acceptable living standards).

# BRE Report 209, 'Site Layout Planning for Daylight and Sunlight: A guide to good practice' (2011)

2.4. The leading publication providing national guidance on the provision of daylight and sunlight to new development, and the impacts of development on daylight and sunlight to neighbouring buildings and open spaces, is BRE Report 209, 'Site Layout Planning for Daylight and Sunlight: A guide to good practice' (second edition, 2011). It is referred to in the development plan documents or supplementary planning documents of most planning authorities.

### 2.5. The BRE guide states:

(Its) main aim is ... to help to ensure good conditions in the local environment, considered broadly, with enough sunlight and daylight on or between buildings for good interior and exterior conditions.

The guide is intended for building designers and their clients, consultants and planning officials. The advice given is not mandatory and the report should not be seen as a part of planning policy. Its aim is to help rather than constrain the designer.

Although it gives numerical guidelines, these should be interpreted flexibly because natural lighting is only one of the 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... The calculation methods ... are entirely flexible in this respect.



# British Standard, BS EN 17037:2019, 'Daylight in buildings'

2.6. British Standard, BS EN 17037:2019, 'Daylight in buildings' provides a standard and methodology by which to assess daylight and sunlight in new buildings. It does not deal with sunlight to open spaces or the effects of development on daylight and sunlight to existing neighbouring buildings.

#### Regional planning policy and guidance

#### The London Plan (March 2021)

- 2.1. The London Plan 2021 is the Spatial Development Strategy for Greater London. It sets out a framework for how London will develop over the next 20-25 years and the Mayor's vision for Good Growth. Its policies should inform decisions on planning applications across the capital.
- 2.2. The Plan notes that if London is to meet the challenges of the future, all parts of London will need to embrace and manage change. In many places, change will occur incrementally, especially in outer London, where the suburban pattern of development has significant potential for appropriate intensification over time, particularly for additional housing. The areas that will see the most significant change are identified as Opportunity Areas, many of which are already seeing significant development. London's Central Activities Zone (CAZ) and town centre network have a crucial role to play in supporting London's growth.

#### Policy GG2 'Making the best use of land'

# 2.3. Policy GG2 states:

To create successful sustainable mixed-use places that make the best use of land, those involved in planning and development must:

- B prioritise sites which are well-connected by existing or planned public transport
- C proactively explore the potential to intensify the use of land to support additional homes and workspaces, promoting higher density development, particularly in locations that are well-connected to jobs, services, infrastructure and amenities by public transport, walking and cycling
- D applying a design-led approach to determine the optimum development capacity of sites

#### Policy D3 'Optimising site capacity through the design-led approach'

#### 2.4. Policy D3 states:

- A All development must make the best use of land by following a design-led approach that optimises the capacity of sites, including site allocations. Optimising site capacity means ensuring that development is of the most appropriate form and land use for the site...
- B Higher density developments should generally be promoted in locations that are well connected to jobs, services, infrastructure and amenities by public transport, walking and cycling...

# Policy D9 'Tall buildings'

### 2.5. Policy D9 states:

#### *Impacts*

- C Development proposals should address the following impacts:
  - 3) environmental impact
    - a) wind, daylight, sunlight penetration and temperature conditions around the building(s) and neighbourhood must be carefully considered and not



compromise comfort and the enjoyment of open spaces, including water spaces, around the building

#### Good Quality Homes for all Londoners - consultation draft (October 2020)

- 2.6. 'Good Quality Homes for All Londoners' is consultation draft guidance on housing design and delivery. The consultation ended in January 2021 and the final guidance is awaited. It illustrates the direction of travel for standards and guidance for housing design in London, including daylight and sunlight guidance.
- 2.7. The supporting text on daylight, sunlight and overshadowing states:

#### Balancing natural light

Providing good levels of natural light makes for a more pleasant internal environment, improving wellbeing as well as reducing the energy required for artificial lighting. This document prioritises good daylight to the home in determining suitable development capacity...

...Natural light can be restricted in densely developed areas. However, an appropriate degree of flexibility needs to be applied when using BRE guidelines to assess the daylight and sunlight impacts within proposed new homes, as well as the impact that proposed development would have on surrounding homes and open spaces.

#### Applying BRE guidelines in relation to neighbouring homes

Decision-makers should recognise that fully optimising housing potential on sites may necessitate standards which depart from those presently experienced, but which still achieve satisfactory levels of residential amenity and avoid unacceptable harm.

Guidelines should be applied sensitively to higher density development, where BRE advice suggests considering the use of alternative targets. This should take into account local circumstances, the need to optimise housing capacity, and the scope for the character and form of an area to change over time.

The BRE guidelines apply nationwide, and the default numerical targets provided are purely advisory. These are based on a uniform, 25-degree development angle (vertical obstruction angle) typical of a low-rise suburban location. This corresponds to the Vertical Sky Component (VSC) target of 27 per cent cited in the guidelines. Typical development angles in a city or central urban location are considerably higher. In Central London, development angles of 40 degree or 50 degree are common and can, if well planned, deliver successful schemes. A uniform development angle of 40 degree corresponds to a VSC target of 18 per cent, and 50 degree gives a VSC target of 13 per cent. Such daylight levels have been accepted in many desirable central areas for well over a century. Module A: Optimising Site Capacity - A Design-led Approach therefore adopts a 50-degree development angle to determine offset distances.

Even with access to good levels of daylight on the outside of a building, it is possible to have low levels of daylight within a building due to design features such as small windows, recessed windows, poor placement of balconies or deep rooms. Therefore, consideration of the retained target VSC should be the principal consideration. Where this is not met in accordance with BRE guidance, it should not be less than 0.8 times its former value (which protects areas that already have low daylight levels).

Less weight should be given to the room-based measures of daylight such as 'no-sky line' or average daylight factor as these are dependent on the design of the neighbouring property. Except in exceptional circumstances, design features of neighbouring properties (referred to above) should not hamper the development potential of a site.



#### Applying BRE guidelines in relation to proposed homes

It may be possible to mitigate lower external daylight VSC levels by using design features such as larger windows, roof lights and light coloured internal and external surfaces to ensure reasonable internal daylight levels. Therefore, room-based measures of daylight and sunlight are most appropriate for judging the acceptability of a proposed development, as these encourage good daylight design. Appropriate 3D modelling should be used to demonstrate acceptable levels.

BRE guidelines confirm that the acceptable minimum average daylight factor target value depends on the room use. That is 1 per cent for a bedroom, 1.5 per cent for a living room and 2 per cent for a family kitchen. In cases where one room serves more than one purpose, the minimum ADF should be that for the room type with the higher value. Notwithstanding this, the independent daylight and sunlight review states that in practice, the principal use of rooms designed as a 'living room/kitchen/dining room' is as a living room. Accordingly, it would be reasonable to apply a target of 1.5 per cent to such rooms.

The need for balconies to be a minimum depth so as to function as usable amenity space, (see C4 Dwelling Space Standards), can have significant bearing on the daylight and sunlight levels reaching nearby windows and rooms. Inevitably, any window or room under a balcony will receive much lower daylight and sunlight levels, although the adjacent balcony space will typically have excellent levels of daylight and sunlight amenity. Given this, the Mayor encourages boroughs to allow the daylight levels on the balcony to contribute to the ADF of the adjacent living space.

#### Overshadowing

The BRE guidelines recommend that at least half of private amenity and public open space should receive at least two hours of sunlight on March 21. Development should be designed to maximise sunlight in these spaces, particularly during the winter, and at least meet the BRE guidelines. The design of outside communal space should be planned so that seating areas or play space are located in the areas that are most likely to receive sunlight.

#### Local planning policy

#### Camden Local Plan 2017

- 2.8. The Camden Local Plan (adopted 3 July 2017) contains the following policies that are relevant to daylight and sunlight.
- 2.9. Policy A1 'Managing the impact of development' states:

The Council will seek to protect the quality of life of occupiers and neighbours. We will grant permission for development unless this causes unacceptable harm to amenity.

We will:

a. seek to ensure that the amenity of communities, occupiers and neighbours is protected; ...

The factors we will consider include: ... f. sunlight, daylight and overshadowing;

#### 2.10. The supporting text states, at paragraph 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). Further detail can be found within our supplementary planning document Camden Planning Guidance on amenity.

### Camden Planning Guidance, 'Amenity'

2.11. Camden's Planning Guidance on Amenity (adopted January 2021) contains supplementary planning guidance of relevance to daylight and sunlight. It states:

The Council expects applicants to consider the impact of development schemes on daylight and sunlight levels. Where appropriate a daylight and sunlight assessment should submitted which should be follow the guidance in the BRE's 'Site layout planning for daylight and sunlight: A guide to good practice'.

Levels of reported daylight and sunlight will be considered flexibly taking into account site-specific circumstances and context.

The Council aims to protect the quality of life of occupiers and neighbours through Local Plan policy A1 Managing the Impact of Development, which seeks to ensure that development does not cause unacceptable harm to amenity, including in terms of daylight and sunlight.

Major developments and proposals for new dwellings are expected to provide daylight and sunlight reports. These should always include the daylight and sunlight levels to any proposed new residential units. The reports should also include any nearby existing residential properties that may be affected. Although it is normally only residential uses that are assessed, there may also be non-residential uses, existing nearby or proposed as part of the application, that are particularly sensitive to light and so justify a report.

To help determine whether a daylight and sunlight report is needed for other types of development, the Council will have regard to several tests, taken from the BRE guidance. These are referred to as the 45-degree test and the 25- degree test.

The BRE guidance should form the basis for daylight and sunlight reports. They should be prepared by a specialist surveyor or consultant and assess the following:

- Levels of daylight and sunlight that occupiers are likely to experience within the proposed development and gardens and open spaces (where relevant); and
- 2. The extent that the proposed development is likely to cause on levels of daylight and sunlight entering windows of neighbouring properties, gardens and open spaces (where relevant)

Daylight and sunlight reports should also demonstrate how the design has taken into consideration the guidance contained in the BRE document on passive solar design; and have optimised solar gain.

The Council will expect daylight and sunlight reports to report daylight and sunlight levels using the tools cited in the BRE guidance. The most common tools used are:

- Vertical Sky Component (VSC)
- No Sky Line (NSL) also referred to as Daylight Distribution (DD)
- Average Daylight Factor (ADF)
- Annual Probable Sunlight Hours (APSH)

# Flexible consideration of daylight and sunlight

The Council notes the intentions of the BRE document is to provide advice to developers and decision makers and therefore it should be regarded as a guide rather than policy.



While we support the aims of the BRE methodology for assessing sunlight and daylight we will consider the outcomes of the assessments flexibly where appropriate, taking into account site specific circumstances and context. For example, to enable new development to respect the existing layout and form in some historic areas, or dense urban environments, it may be necessary to consider exceptions to the recommendations cited in the BRE guidance. Any exceptions will assessed on a case-by-case basis.

#### Camden Planning Guidance, 'Housing'

2.12. Camden's Planning Guidance on Housing (adopted January 2021) contains supplementary planning guidance of relevance to daylight and sunlight. It states:

#### Layout

In general, the internal layout should seek to ensure the main living room and other frequently used rooms are on the south side and rooms that require less sunlight (bathrooms, utility rooms) are on the north side. Kitchens are better positioned on the north side to avoid excessive heat gain.

Additionally, it is preferable that permanent partitions are present between eating and sleeping areas; and between kitchens and living rooms. Combined kitchens and living areas can be acceptable where sufficient floor area allows a greater range of activity.

- Dual aspect Proposals should achieve good dual aspect [London Housing SPG 2016 Standard 29]. Habitable rooms should also have suitable outlook.
- Natural light, Daylight/sunlight All the habitable rooms must have direct natural light, particularly the main living room. The applicant must ensure that the levels of daylight and sunlight that enter habitable rooms comply with BRE standards and that the report for 'Daylight and Sunlight' is submitted with the proposal [London Housing SPG 2016 Standard 32; CPG for Amenity].

#### **Amenity**

 Amenity of neighbours – The proposal should not have a significant detrimental impact to neighbouring amenity in terms of neighbouring outlook, privacy, sunlight, daylight, noise or vibration. Additionally, the proposal should not result in any overlooking into neighbouring habitable rooms. [Local Plan Policy A1; CPG for Design and for Amenity].



# 3. Acceptability of daylight/sunlight levels and impacts

- 3.1. The assessment of impact on daylight and sunlight amenity is a two-part process<sup>1</sup>: first, as a matter of calculation, whether there would be a material deterioration in conditions by reference to the BRE guidelines; and second, as a matter of judgment, whether that deterioration would be acceptable in the circumstances.
- 3.2. The first stage can be addressed by applying the BRE assessment methodology and numerical guidelines. The second stage brings into play much wider considerations, such as:
  - i) Whether the neighbouring building stands unusually close to the site boundary, including the highway, taking more than its fair share of light, such that a greater reduction in light may be unavoidable if one site is not to be prejudiced by how another has been developed. (A 'mirror-image' study can be informative in such cases.)
  - ii) Whether windows in neighbouring buildings are self-obstructed by overhanging or inset balconies or other projections such as to make relatively larger reductions unavoidable even if there is a modest new obstruction opposite in effect themselves taking away more than their fair share of light. (A 'without balconies' study can be informative in such cases.)
  - iii) In historic city centres or areas characterised by modern tall buildings, high density and close proximity, a higher degree of obstruction may be unavoidable if new buildings are to match the height and proportion of existing buildings.
  - iv) In areas that are designated by planning authorities for substantial growth or providing opportunities for change and sustainable regeneration, the sort of change that would be brought about by the introduction of taller, denser development is to be expected, including reductions in daylight and sunlight levels, closer proximity, loss of outlook, etc.
- 3.3. Where a higher degree of obstruction may be unavoidable it is appropriate to consider the reasonableness of the retained levels of daylight and sunlight with the proposed development in place.

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<sup>&</sup>lt;sup>1</sup> Rainbird, R (on the application of) v The Council of the London Borough of Tower Hamlets [2018]



# 4. Assessment methodology and numerical guidelines

- 4.1. The technical assessments that underpin this daylight and sunlight study have been carried out in accordance with the assessment methodology recommended in the BRE guide.
- 4.2. The principal assessments and numerical criteria are summarised below. A fuller explanation of the assessment methodology is given at Appendix 1 of this report.
- 4.3. British Standard, BS EN 17037:2019, 'Daylight in buildings' provides an alternative method for assessing daylight and sunlight in new buildings; however, it does not cover impacts on existing neighbouring buildings or sunlight to open spaces. The BRE guide does and is the leading publication providing national guidance and is referred to in development plan documents or supplementary planning documents of most planning authorities. We have therefore followed the methodologies in the BRE guide.

#### **New development**

#### Daylight to new dwellings

- 4.4. The principal BRE test for daylight provision to rooms in new buildings is the average daylight factor (**ADF**), which measures the overall amount of daylight in a space.
- 4.5. The calculation takes account of the amount of visible sky, net glazed area of windows/doors, diffuse visible light transmittance of the glazing, maintenance factor for the effects of dirt, total area of the room surfaces and their average reflectance.
- 4.6. The minimum recommended ADF in housing is 1% for bedrooms, 1.5% for living rooms and 2% for kitchens. Bathrooms, stairwells and other areas without a special requirement for daylight need not be assessed.
- 4.7. Strictly speaking, in multi-purpose rooms, such as open-plan living/kitchen/dining rooms (LKDs), the target for kitchens should apply. However, planning authorities frequently accept the living room target (1.5% ADF) for LKDs in modern housing development. That view is supported by the author of the BRE guide, Dr Paul Littlefair, who explains it thus²:

Where a room has a shared use, the British Standard states that the higher minimum value should apply. However, local authorities frequently accept the living room standard for a shared kitchen/living room, as a small kitchen would not be considered as a habitable room. This is a practical approach, as it is seldom in the final resident's interest to have a closed off, small kitchen which is completely artificially lit in order to force compliance with the Standard for the living room. In this case an average daylight factor of 1.5% or more might be acceptable.

- 4.8. We have therefore adopted an alternative target of 1.5% for LKDs in our assessment
- 4.9. For good daylight distribution, at least 80% of the area of the working plane in a room should lie within the no-sky line (NSL) to receive direct skylight) and the room depth criterion (RDC) should be satisfied.

# Sunlight to new dwellings

- 4.10. In housing, sunlight should be assessed in living rooms and conservatories. The amount of sunlight reaching the interior of a space is measured by calculating the percentage of annual probable sunlight hours (**APSH**) reaching the centre of each window.
- 4.11. The BRE guide recommends that living rooms and conservatories should receive at least 25% APSH, including least 5% of APSH in the winter months between 21 September and 21 March. Where groups of dwellings are planned, site layout design should aim to maximise the number of dwellings meeting this recommendation.

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<sup>&</sup>lt;sup>2</sup> BRE Client Report (paragraph 2.3.5) dated 5 March 2019 for Reardon and Lowder Houses, Wapping on behalf of London Borough of Tower Hamlets (LBTH planning application reference PA/18/03541/A1)



#### Existing neighbouring buildings and amenity spaces

#### Daylight to neighbouring buildings

4.12. If the head of the new development subtends an angle of more than 25° measured from the centre of the lowest affected window in an existing neighbouring building in a plane perpendicular to the window wall, then a more detailed check is needed to find the loss of skylight.

#### 4.13. The more detailed tests are:

- vertical sky component (VSC) at the centre of each main window, which measures the total amount of skylight available; and
- ii) no-sky line (**NSL**) on the working plane inside a room, where room layouts are known, which measures the area that can receive direct skylight and assesses the distribution of daylight around the room.
- 4.14. Loss of daylight resulting from development will be noticeable if either:
  - the VSC at the centre of the window will be reduced to both less than 27% and less than 0.8 times its former value, or
  - the area of the working plane in a room that is enclosed by the no-sky line (NSL) and can receive direct skylight will be reduced to less than 0.8 times its former value.
- 4.15. In respect of these numerical guidelines, the BRE guide states:

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

4.16. In respect of the windows and rooms to be assessed, the BRE guide states:

The guidelines given here are intended for use for rooms in adjoining dwellings where daylight is required, including living rooms, kitchens and bedrooms.

- 4.17. In housing, living rooms, dining rooms and kitchens have a greater requirement for daylight. Bedrooms should also be analysed but are less important. Bathrooms, stairwells and other areas without a requirement for daylight need not be assessed.
- 4.18. For a bay window, the centre window facing directly outwards can be taken as the main window for the VSC calculation. If a room has two or more windows of equal size, the mean of their VSCs may be taken.
- 4.19. A third daylight test in the BRE guide is the average daylight factor (**ADF**), which assesses the average level of daylight inside a room. It is primarily intended for assessing daylight provision to new buildings, but it may also be used to assess neighbouring consented development that is not yet built and could be affected by the proposed development.
- 4.20. The ADF test can potentially be a useful supplementary test for existing neighbouring buildings to aid a more rounded judgement on the acceptability of VSC and NSL effects, as the post-development retained ADF values may be checked against the minimum recommendations for new dwellings. They are 1% for bedrooms, 1.5% for living rooms and 2% for kitchens.
- 4.21. Strictly speaking, in multi-purpose rooms, such as open-plan living/kitchen/dining rooms (LKDs), the target for kitchens should apply. However, planning authorities frequently accept the living room target (1.5% ADF) as a suitable alternative target for LKDs in modern dense housing developments. That view is supported by the author of the BRE guide, Dr Paul Littlefair, who explains it thus<sup>3</sup>:

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<sup>&</sup>lt;sup>3</sup> BRE Client Report (paragraph 2.3.5) dated 5 March 2019 for Reardon and Lowder Houses, Wapping on behalf of London Borough of Tower Hamlets (LBTH planning application reference PA/18/03541/A1)



Where a room has a shared use, the British Standard states that the higher minimum value should apply. However, local authorities frequently accept the living room standard for a shared kitchen/living room, as a small kitchen would not be considered as a habitable room. This is a practical approach, as it is seldom in the final resident's interest to have a closed off, small kitchen which is completely artificially lit in order to force compliance with the Standard for the living room. In this case an average daylight factor of 1.5% or more might be acceptable.

#### Sunlight to neighbouring buildings

- 4.22. In designing new development, care should be taken to safeguard the access to sunlight for existing dwellings and any nearby non-domestic buildings where there is a particular requirement for sunlight.
- 4.23. Obstruction to sunlight may become an issue if part of the development is situated within 90° of due south of a main window wall of an existing building, and in the section drawn perpendicular to this existing window wall, the new development subtends an angle greater than 25° to the horizontal measured from the centre of the lowest window to a main living room.
- 4.24. The amount of sunlight reaching a room is measured by calculating the percentage of annual probable sunlight hours (**APSH**) at the centre its windows.
- 4.25. If, following development, the APSH will be greater than 25%, including at least 5% of APSH in the winter months between 21 September and 21 March, then the room should still receive enough sunlight.
- 4.26. Sunlight will be adversely affected if the centre of the window will:
  - receive less than 25% APSH or less than 5% APSH during the winter months (21 September to 21 March); and
  - less than 0.8 times its former sunlight hours during either period; and
  - the reduction in sunlight over the whole year will be greater than 4% APSH.
- 4.27. All main living rooms of dwellings, and conservatories, should be checked if they have a window facing within 90° of due south.
- 4.28. When asked to clarify whether bedrooms should be assessed, the author of the BRE guide, Dr Paul Littlefair, wrote:

"The BRE Report 'Site layout planning for daylight and sunlight: a guide to good practice' recommends that 'all main living rooms of dwellings, and conservatories, should be checked if they have a window facing within 90° of due south. Kitchens and bedrooms are less important, although care should be taken not to block too much sun.' Normally we would not include loss of sunlight to bedrooms in a detailed analysis; and loss of sunlight to bedrooms would not be treated as a material issue except in bedrooms that also comprised a living space, for example a bed sitting room in an old people's home. Loss of diffuse daylight to bedrooms does need to be taken into account, as stated in paragraph 2.2.2 of the BRE Report." 4

4.29. Our assessment has therefore focused our assessment of the loss of sunlight to living rooms.

<sup>&</sup>lt;sup>4</sup> BRE letter dated 16 December 2014



# 5. Categorisation of magnitudes of impact and significance of effects

5.1. In our summary tables, we have counted the number of impacts that would be inside and outside the BRE guidelines and categorised the latter according to their magnitude of impact. There is no industry-standard scale and this study adopts the approach in Table 1 below.

Table 1 – Categorisation of magnitudes of impact on existing neighbouring properties

Impact inside BRE	Impact outside BRE guidelines			
guidelines	<b>0.70-0.79</b> times former value (21% to 30% loss)	<b>0.60-0.69</b> times former value (31% to 40% loss)	<0.60 times former value (>40% loss)	
Negligible impact	Low adverse impact	Medium adverse impact	High adverse impact	

5.2. To understand the significance of effect on a building, it is necessary to consider both the number and magnitude of impacts and a range of other factors. Appendix I of the BRE guide, which is intended for use in Environmental Impact Assessments, provides the following advice on ascribing significance to effects:

Adverse impacts occur when there is a significant decrease in the amount of skylight and sunlight reaching an existing building where it is required, or in the amount of sunlight reaching an open space.

The assessment of impact will depend on a combination of factors, and there is no simple rule of thumb that can be applied.

Where the loss of skylight or sunlight fully meets the guidelines, the impact is assessed as negligible or minor adverse. Where the loss of light is well within the guidelines, or only a small number of windows or limited area of open space lose light (within the guidelines), a classification of negligible impact is more appropriate. Where the loss of light is only just within the guidelines, and a larger number of windows or open space area are affected, a minor adverse impact would be more appropriate, especially if there is a particularly strong requirement for daylight and sunlight in the affected building or open space.

Where the loss of skylight or sunlight does not meet the guidelines, the impact is assessed as minor, moderate or major adverse. Factors tending towards a minor adverse impact include:

- only a small number of windows or limited area of open space are affected;
- the loss of light is only marginally outside the guidelines;
- an affected room has other sources of skylight or sunlight;
- the affected building or open space only has a low level requirement for skylight or sunlight; and
- there are particular reasons why an alternative, less stringent, guideline should be applied.

Factors tending towards a major adverse impact include:

- a large number of windows or large area of open space are affected;
- the loss of light is substantially outside the guidelines;
- all the windows in a particular property are affected; and
- the affected indoor or outdoor spaces have a particularly strong requirement for skylight or sunlight, e.g. a living room in a dwelling or a children's playground.



# 6. Flexible application of the guidelines and alternative target values

- 6.1. As noted in paragraph 2.4 above, the BRE guide states that its default numerical guidelines are not mandatory and must be interpreted flexibly because natural lighting is only one of many factors in site layout design. In certain circumstances, such as city centres or areas 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.
- 6.2. We set out below some examples of a flexible approach to applying the BRE guidelines that are of relevance.

#### Reasonableness of retained values in a site's context

- 6.3. One example of flexible application of the guidelines was demonstrated in the Inspector's appeal decision for a development of the Whitechapel Estate site between Varden Street and Ashfield Street, London E1 in the London Borough of Tower Hamlets in February 2018 (Appeal Ref: APP/E5900/W/17/3171437).
- 6.4. In the aforementioned case the Inspector found that materially adverse impacts on daylight were nonetheless acceptable. He noted that development that resulted in a proportion of residual VSC values in the mid-teens, with a smaller proportion in the bands below 15% VSC, have been found acceptable in major developments across London. More specifically, the Inspector stated:
  - 108. The BRE document offers guidance on generally acceptable standards of daylight and sunlight, but advises that numerical values are not to be rigidly applied and recognises the importance of the specific circumstances of each case. Inner city development is one of the examples where a different approach might be justified. This is specifically endorsed by the [Mayor of London's] Housing SPG, which calls for guidelines to be applied sensitively to higher density developments, especially in (among others) opportunity areas and accessible locations, taking into account local circumstances, the need to optimise housing capacity, and the scope for the character and form of an area to change over time. ... I agree with the appellants that blanket application of the BRE guide optimum standards, which are best achieved in relatively low-rise well spaced layouts, is not appropriate in this instance.
  - 109. The SPG advises that the daylight impact on adjacent properties should be assessed drawing on "broadly comparable residential typologies within the area and of a similar nature across London"...
  - 112. The figures [from comparable typologies from a range of example sites across Central London analysed by the appellants, comprising both traditional urban streets and recently permitted areas of significant development] show that a proportion of residual Vertical Sky Component ('VSC') values in the mid-teens have been found acceptable in major developments across London. This echoes the Mayor's endorsement in the pre SPG decision at Monmouth House, Islington that VSC values in the mid-teens are acceptable in an inner urban environment. They also show a smaller proportion in the bands below 15%...
  - 113. I acknowledge that a focus on overall residual levels could risk losing sight of individual problem areas. It is accepted that light is only one factor in assessing overall levels of amenity, but I consider that the trade-off with other factors, such as access to public transport or green space, is likely to be of more relevance to an occupier of new development than to an existing neighbour whose long-enjoyed living conditions would be adversely affected by new buildings. However, I also consider that Inner London is an area where there should generally be a high expectation of development taking place. This is particularly so in the case of the appeal site, where the Whitechapel Vision Masterplan and the City Fringe Opportunity Area Planning Framework have flagged the desirability of high density development. Existing residents would in my view be prepared for change and would not necessarily expect existing standards of daylight and sunlight to persist after development.



6.5. Ultimately, it is for the planning authority to judge whether affected properties would be left with acceptable levels of daylight and sunlight in their neighbourhood context, having regard to all relevant planning policies and guidance and balanced against the merits of the proposed development.

#### Proximity of neighbouring building to site boundary

- 6.6. Another important issue is whether the existing building is itself a good neighbour, standing a reasonable distance from the boundary and taking no more than its fair share of light. Appendix F of the BRE guide gives further guidance. This involves setting alternative target values generated from the layout dimensions of the existing neighbouring building and its position relative to the boundary. To ensure that new development matches the height and proportions of existing buildings, the VSC and APSH targets for the neighbouring windows could be set to those for a 'mirror-image' building of the same height and size, an equal distance away on the other side of the boundary.
- 6.7. In the Inspector's appeal decision for a development at Enterprise House, 21 Buckle Street, London E1 8NN in the London Borough of Tower Hamlets dated 17 December 2018 (Appeal Ref: APP/E5900/W/17/3191757) he interpreted this as applying to buildings built at the back edge of pavement and whose windows were therefore "effectively on the site boundary". He stated:
  - 19. ... The BRE Guide recognises that windows that are unusually close to the boundary take more than their fair share of light. This is an acknowledgement that the first built scheme of a local cluster could otherwise prevent the full potential of adjacent sites from being realised.
  - 20. In such inequitable circumstances the Rainbird judgement found that 'If an existing building has been so designed that, whether by the inclusion of balconies or overhangs, it makes relatively larger reductions in daylight unavoidable even if there is a modest new obstruction opposite, that design could be seen as taking for the existing building 'more than their fair share of light' in the same way the BRE Guide regards a building that has windows that 'are unusually close to the site boundary' as doing; in each case, a greater reduction in daylight and sunlight may be unavoidable if one site is not to be unfairly prejudiced by how another has been developed.'5
  - 21. In such a situation the BRE Guide advises that 'To ensure that new development matches the height and proportion of existing buildings, the VSC and APSH targets for these windows could be set to those for a 'mirror-image' building of the same height and size, an equal distance away on the other side of the boundary.<sup>6</sup>
  - 22. The appellants carried out an assessment of the impact on all affected windows through a range of criteria, including a mirror image exercise with the 28 storey Altitude/Goldpence Apartments building...
  - 23. The mirror-image exercise, although not quite to the letter of the guidelines, gives a clear indication that overall, in this more equitable arrangement, many more flats in the Altitude/Goldpence Apartments building would be affected and many more in the upper storeys would have a material deterioration in daylight and sunlight levels similar to those in the lower storeys. Such an impact would be considered acceptable, in terms of a fair share of light. In my view this provides a reasonable justification for a greater reduction in daylight and sunlight levels in the surrounding buildings as a result of this proposal than might otherwise be considered appropriate. By strictly applying the BRE guidelines, development of the site would be unfairly prejudiced.

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<sup>&</sup>lt;sup>5</sup> Rainbird, R (on the application of) v The Council of the London Borough of Tower Hamlets [2018]

<sup>&</sup>lt;sup>6</sup> Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice (2nd Edition, 2011) - Appendix F para F5.



#### Self-obstructing balconies, wings and other projections

- 6.8. Balconies and projecting wings to existing neighbouring buildings obstruct the available daylight and sunlight and can therefore cause relative reductions in light to be amplified. The BRE guide states:
  - 2.2.11 Existing windows with balconies above them typically receive less daylight. Because the balcony cuts out light from the top part of the sky, even a modest obstruction opposite may result in a large relative impact on the VSC, and on the area receiving direct skylight. One way to demonstrate this would be to carry out an additional calculation of the VSC and area receiving direct skylight, for both the existing and proposed situations, without the balcony in place. For example, if the proposed VSC with the balcony was under 0.8 times the existing value with the balcony, but the same ratio for the values without the balcony was well over 0.8, this would show that the presence of the balcony, rather than the size of the new obstruction, was the main factor in the relative loss of light.
  - 2.2.12 A larger relative reduction in VSC may also be unavoidable if the existing window has projecting wings on one or both sides of it, or is recessed into the building so that it is obstructed on both sides as well as above.
  - 3.2.9 Balconies and overhangs above an existing window tend to block sunlight, especially in summer. Even a modest obstruction opposite may result in a large relative impact on the sunlight received. One way to demonstrate this would be to carry out an additional calculation of the APSH, for both the existing and proposed situations, without the balcony in place. For example, if the proposed APSH with the balcony was under 0.8 times the existing value with the balcony, but the same ratio for the values without the balcony was well over 0.8, this would show that the presence of the balcony, rather than the size of the new obstruction, was the main factor in the relative loss of sunlight.
- 6.9. Clearly, balconies, wings and other projections from buildings can be a factor in the relative light loss to such buildings. In such instances it can be helpful to run a supplementary assessment with the projections removed, in order to understand the degree to which they contribute to the relative light loss.

#### Deep, side-lit rooms

6.10. Another example where the standard numerical guidelines need to be applied sensibly is in relation to deep, side-lit rooms. The BRE guide states:

If an existing building contains rooms lit from one side only and greater than 5 m deep, then a greater movement of the no sky line may be unavoidable.

#### Truncated living/kitchen/diner

6.11. Given the greater flexibility afforded by the NPPF and Mayor of London's Housing SPG, it is appropriate to separate kitchens from living/kitchen/diners if they are located in the rear of the room and can reasonably be considered as a separate, internalised non-day-lit room. Where it cannot be reasonably separated, the kitchen should be included as the part of the room as a whole.



# 7. Scope of the assessment

#### **New development**

- 7.1. Within the proposed development, we have assessed daylight and sunlight to all habitable rooms, on all floors.
- 7.2. Daylight has been assessed to all types of habitable rooms.
- 7.3. Sunlight has been assessed to all types of habitable rooms, where they have at least one window facing within 90° of due south.

#### **Neighbouring buildings**

- 7.4. The principal recommendations in the BRE guide relate to residential buildings. Its guidelines on daylight are intended for use for rooms in neighbouring dwellings where daylight is required, including living rooms, kitchens and bedrooms (BRE paragraph 2.2.2). Its guidelines on sunlight apply to all main living rooms of neighbouring dwellings and conservatories that have a window facing within 90° of due south (BRE paragraph 3.2.3).
- 7.5. Consequently, our assessment has been scoped to include nearby residential accommodation, as is common practice for studies for planning applications.
- 7.6. We identified the properties that are in residential use from a site visit and online research, including the Valuation Office Agency council tax list, local authority planning records, and estate agency websites.
- 7.7. We have run the BRE daylight and sunlight tests in the existing baseline and proposed development scenarios. This establishes the levels that would be retained in the proposed development condition and the degree to which they change from the existing baseline.



# 8. Information used in our technical study

- 8.1. We have undertaken our technical study using a 3D computer model built in AutoCAD and specialist analysis software, which runs the assessments recommended in the BRE guide.
- 8.2. We compiled our 3D computer model from the following information:
  - 8.2.1. 3D computer model of the existing buildings on the Site and the contextual massing produced from photogrammetry (aerial photography) supplied by AccuCities Ltd, subsequently enhanced by us with the more detailed information listed below
  - 8.2.2. Measured survey information from APR Services
  - 8.2.3. Floor plans for neighbouring buildings, where available
  - 8.2.4. Proposed development: 3D model supplied by Pollard Thomas Edwards Architects in 2022 (file name: APR-PTE-ZZZ-XX-M3-A-00002\_Building-Copy (2)-1.0-rvt)
- 8.3. To aid accuracy of the assessment and interpretation of the results, we carried out online searches to obtain the floor plans for the neighbouring buildings referred to above, including from online planning application records and general estate agency websites. This is the approach recommended in the Professional Guidance Note, 'Daylighting and sunlighting' (1st edition, 2012), published by the Royal Institution of Chartered Surveyors, which states:

As a minimum, and subject to any limitations relating to a client instruction, surveyors should undertake searches of the local authority's planning portal to establish existing or proposed room layouts of neighbouring properties if they are available. This will ensure a robust approach and enable the surveyor to produce reliable information for daylight distribution analysis, or if average daylight factor (ADF) tests are appropriate ... Surveyors should also use the internet to search for other relevant information, including estate agent details, which commonly include plans of properties that can also be useful in determining a room layout or use.

8.4. Our research yielded the information listed in **Table 2** below. The plan ref. refers to the numbering on the location plan at Appendix 2.

Table 2 - Information on internal layouts of neighbouring properties

Plan ref.	Neighbouring property	Nature of plans	Comment
1	2 Priory Terrace	Plans from council planning records	Full plans
3	6 Priory Terrace	Plans from council planning records	Full plans
6	12 Priory Terrace	Plans from council planning records	Partial plans
9	18 Priory Terrace	Plans from council planning records	Full plans
10	20 Priory Terrace	Plans from council planning records	Full plans
11	22 Priory Terrace	Plans from council planning records	Full plans
15	30 Priory Terrace	Plans from council planning records	Partial plans
17	34 Priory Terrace	Plans from council planning records	Partial plans
19	142 Abbey Road	Plans from council planning records	Full plans
20	126 Abbey Road	Plans from council planning records	Full plans
21	124 Abbey Road	Plans from council planning records	Full plans
23	125 Belize Road	Plans from council planning records	Full plans
24	127 Belsize Road	Plans from council planning records	Full plans



Plan ref.	Neighbouring property	Nature of plans	Comment
25	129 Belsize Road	Plans from council planning records	Full plans
28	181 Belsize Road	Plans from council planning records	Full plans

- 8.5. Where we found plans for neighbouring properties, we used them to model their rooms. Where we were been unable to find plans, we modelled their rooms based on estimated dimensions, typically adopting a generic 4m-deep room for residential premises, unless the style of building suggested otherwise.
- 8.6. Our 3D computer model is shown on our spot-height drawings at Appendix 2.
- 8.7. For the ADF assessment we used the window and room parameters stated in Table 3.

Table 3 – Window and room parameters used in ADF calculations

Parameter	Value – Neighbouring Properties	Value – Proposed Dwellings
Maintenance factor (dirt on glass)	0.92 for vertical windows with normal exposure in residential developments in urban locations with good maintenance	0.92 for vertical windows with normal exposure in residential developments in urban locations with good maintenance
Diffuse light transmittance of glazing	0.8 for single glazing, 0.68 for double glazing	0.68 for double glazing
Frame and glazing bar factor	0.7 for wooden frames and large panes of glass	0.8 for metal frames and large panes
Internal surface reflectance	0.5 – BRE default mean value where finishes are not known	0.85 for white ceilings 0.81 for pale cream walls 0.4 for light wood floors

#### **Limitations and assumptions**

- 8.8. In compiling our 3D computer model for our technical study, we have sought to be as accurate as reasonably possible within the scope of our instruction. We have relied upon the information noted above.
- 8.9. Whilst we have used plans for neighbouring buildings where available, we have typically made reasonable assumptions as to their internal floor levels and wall thicknesses.
- 8.10. We have used proven and trusted specialist computer software (Waldram Tools for AutoCAD®) to run the calculations recommended in the BRE guide.
- 8.11. To the best of our knowledge, the information and advice contained in this report is accurate at the date of issue, based on the information provided to or procured by us prior to its production.



# 9. Light within the proposed development

- 9.1. It should be noted that where there are open-plan living/kitchen/dining rooms (LKDs) which have kitchens in the rear of the space, they have been notionally truncated to exclude the kitchen area. This effectively treats it as a non-day-lit internalised room, and the remaining living/dining area has been assessed. This is a deviation from the standard methodology and estimates the average daylight in the living area, not the average for the room. However, given the greater flexibility afforded by the NPPF and the Mayor of London's Housing SPG, it is advised this is a reasonable approach.
- 9.2. Where kitchens cannot be reasonably truncated, they have been left to be included in the wider room area as it is believed this is a more appropriate approach for this type of layout.
- 9.3. Both standard and alternative guideline targets have been assessed and reported to provide a more comprehensive understanding of the levels in the proposed development. As previously stated, the BRE guide says that its default numerical guidelines are not mandatory and must be interpreted flexibly because natural lighting is only one of many factors in site layout design.

#### Daylight to new dwellings

#### **ADF**

9.4. The results of the ADF test for the assessed proposed dwellings are set out in the table of results at Appendix C. The level of adherence to the BRE numerical guidelines is summarised in Table 4 below.

Table 4 - Number of rooms meeting ADF guidelines – Truncated kitchens

Floor level	Total number of rooms tested	Number of rooms meeting ADF guidelines	Number of rooms below ADF guidelines
Block A	163	106	57
Block B	152	126	26
Block C	82	62	20
Total	397	294	103

- 9.5. Table 4 shows that 294 (74%) rooms assessed would satisfy the BRE guidelines for ADF.
- 9.6. Of the rooms that do not meet the criteria, there are unavoidable design factors, such as deep rooms where it is challenging to allow light to reach the back of the rooms. The other leading cause of failures is where balconies are situated directly above. 73 of these rooms that fail to meet guidance have windows that are served by an inset balcony or has a balcony directly above. Many of these are bedrooms, which are less reliant on light than the other habitable rooms assessed.

Table 5 - Number of rooms meeting alternative ADF guidelines – Truncated kitchens

Floor level	Total number of rooms tested	Number of rooms meeting ADF guidelines	Number of rooms below ADF guidelines
Block A	163	113	50
Block B	152	132	20
Block C	82	68	14
Total	397	313	84

9.7. When considering alternative target values for ADF in respect of LKD, Kitchens and Studios, 313 rooms satisfy the criteria, making the overall pass rate 79%. As shown in is summarised in Table 5 above.

Table 6 - Number of rooms meeting ADF guidelines – Full room layouts

	<u> </u>		
Floor level	Total number of rooms tested	Number of rooms meeting ADF guidelines	Number of rooms below ADF guidelines
Block A	163	98	65
Block B	152	100	52



Floor level	Total number of rooms tested	Number of rooms meeting ADF guidelines	Number of rooms below ADF guidelines
Block C	82	48	34
Total	397	246	151

9.8. Table 6 shows that 246 (62%) rooms assessed would satisfy the BRE guidelines for ADF when considering the full layout of all LKD's. No truncated kitchens.

Table 7 - Number of rooms meeting alternative ADF guidelines – Full room layouts

Floor level	Total number of rooms tested	Number of rooms meeting ADF guidelines	Number of rooms below ADF guidelines
Block A	163	102	61
Block B	152	122	30
Block C	82	58	24
Total	397	282	115

- 9.9. When considering alternative target values for ADF in respect of LKD, Kitchens and Studios, 282 rooms satisfy the criteria, making the overall pass rate 71%. As shown in is summarised in Table 7 above.
- 9.10. Overall it is believed, given the addition of private external amenity space in the form of balconies the dense surrounding context, and the recommended flexible approach to ADF targets in line with the BRE guidance the level of ADF within the development is appropriate.

#### Additional recommendations: no-sky line

**NSL** 

9.11. The results of the NSL test are set out in the table of results at Appendix C. The level of adherence to the BRE recommendations are summarised in Table 8 below.

Table 8 - Number of rooms meeting NSL guidelines – Truncated kitchens

Floor level	Total number of rooms tested	Number of rooms meeting room depth guidelines	Number of rooms not meeting room depth guidelines
Block A	163	125	38
Block B	152	102	50
Block C	82	54	28
Total	397	281	116

- 9.12. Table 8 shows that 281 (71%) rooms assessed would satisfy the room depth guidelines.
- 9.13. As with the ADF results, there are a number of the rooms that are deep single aspect rooms, and rooms with balconies overhanging above them.
- 9.14. Of the rooms that do not meet criteria, there are factors of design that is unavoidable. 36 rooms are deep rooms, making it difficult to achieve higher levels of direct sky visibility in rear of the room. 47 rooms are served by inset balconies or have balconies overhanging directly above, which also direct sky visibility.
- 9.15. Another element that is limiting direct sky visibility is the position of rooms that look directly onto one of the other buildings within the development or directly at Phase 1 on the south side of Belsize Road. Where possible, bedrooms have been put in these locations, which are less reliant on daylight.

Table 9 - Number of rooms meeting alternative NSL guidelines - Truncated kitchens

Floor level	Total number of rooms tested	Number of rooms meeting room depth guidelines	Number of rooms not meeting room depth guidelines
Block A	163	144	19
Block B	152	128	24



Floor level	Total number of rooms tested	Number of rooms meeting room depth guidelines	Number of rooms not meeting room depth guidelines
Block C	82	65	17
Total	397	337	60

9.16. Table 9 shows that 337 (85%) rooms assessed would satisfy the room depth guidelines. The increase considering the alternative targets allow for a flexible approach to the BRE guidelines that can be considered appropriate.

Table 10 - Number of rooms meeting NSL guidelines – Full room layouts

Floor level	Total number of rooms tested	Number of rooms meeting room depth guidelines	Number of rooms not meeting room depth guidelines
Block A	163	125	38
Block B	152	101	51
Block C	82	53	29
Total	397	279	118

- 9.17. Table 10 shows that 279 (70%) rooms assessed would satisfy the room depth guidelines.
- 9.18. As with the ADF results, there are a number of the rooms that are deep single aspect rooms, and rooms with balconies overhanging above them.

Table 11 - Number of rooms meeting alternative NSL guidelines – Full room layouts

Floor level	Total number of rooms tested	Number of rooms meeting room depth guidelines	Number of rooms not meeting room depth guidelines
Block A	163	144	19
Block B	152	124	28
Block C	82	63	19
Total	397	331	66

- 9.19. Table 11 shows that 331 (83%) rooms assessed would satisfy the room depth guidelines.
- 9.20. As expected, when removing kitchens in the rear of a joint space, it allows light to achieve room depth guidelines. As we believe it is appropriate to consider these truncated kitchens as non-daylight-lit rooms, this is the appropriate approach

#### Sunlight to new dwellings

9.21. The results of the sunlight analysis of the main living rooms with at least one room facing within 90 degrees due south and with truncated kitchens, within the proposed scheme are tabulated at Appendix C and summarised in Table 12 below.

Table 12 - Number of main living rooms meeting APSH guidelines – Truncated kitchens

Location within the proposed development	Total number of rooms tested	Number of rooms meeting APSH guidelines	Number of rooms below APSH guidelines
Block A	57	18	39
Block B	44	42	2
Block C	25	20	5
Total	126	80	46

- 9.22. Table 12 shows that 80 (63%) rooms assessed will satisfy the APSH guidelines.
- 9.23. Of the rooms that do not satisfy both annual and winder APSH guidelines with at least one window facing 90 degrees due south, 15 rooms will satisfy at least either winter guidelines or annual guidelines. Combining these with the 80 rooms that do meet criteria increases the percentage to 75% that either meet both criteria or at least one of winter or annual sunlight guidance.
- 9.24. Considering the alternative guidelines for APSH are summarised in Table 13 below:



Table 13 - Number of main living rooms meeting alternative APSH guidelines – Truncated kitchens

Location within the proposed development	Total number of rooms tested	Number of rooms meeting APSH guidelines	Number of rooms below APSH guidelines
Block A	57	27	30
Block B	44	44	0
Block C	25	22	3
Total	126	93	33

- 9.25. Table 13 shows that 93 (74%) rooms assessed will satisfy the APSH alternative guidelines.
- 9.26. The results of the sunlight analysis of the main living rooms with at least one room facing within 90 degrees due south and with full room layouts within the proposed scheme are tabulated at Appendix C and summarised in Table 14 below.

Table 14 - Number of main living rooms meeting APSH guidelines - Full room layouts

Location within the proposed development	Total number of rooms tested	Number of rooms meeting APSH guidelines	Number of rooms below APSH guidelines
Block A	57	18	39
Block B	44	42	2
Block C	25	20	5
Total	126	80	46

- 9.27. Table 14 shows that 80 (63%) rooms assessed will satisfy the APSH guidelines.
- 9.28. Of the rooms that do not satisfy both annual and winder APSH guidelines with at least one window facing 90 degrees due south, 15 will satisfy either winter or annual sunlight guidelines. This increases the percentage to 82% if you consider rooms that meet both or one of the guidelines for sunlight.
- 9.29. Considering the alternative guidelines for APSH are summarised in Table 15 below:

Table 15 - Number of main living rooms meeting alternative APSH guidelines - Full room layouts

Location within the proposed development	Total number of rooms tested	Number of rooms meeting APSH guidelines	Number of rooms below APSH guidelines
Block A	57	27	30
Block B	44	44	0
Block C	25	22	3
Total	126	93	33

- 9.30. Table 15 shows that 93 (74%) rooms assessed will satisfy the APSH guidelines.
- 9.31. Overall the sunlight experienced by the main living rooms within the development are of good levels with a good number meeting both annual and winder criteria, or at least one of them.



# 10. Baseline condition for neighbouring properties

- 10.1. We have assessed the impacts of the proposed development relative to the existing baseline condition.
- 10.2. The existing baseline scenario and the proposed development scenario are shown on our spotheight drawing no 19495\_SPT\_005 at Appendix 2.
- 10.3. The daylight and sunlight levels in the existing baseline and proposed development conditions are shown in the results tables Appendix 4.
- 10.4. The levels in the proposed scenario are then compared with those in the baseline scenario so that the loss of natural light can be quantified and compared with the BRE numerical guidelines.
- 10.5. Window maps for the assessed buildings are attached at Appendix 2.



# 11. Effects of the proposed development on neighbouring properties

11.1. We assessed the effects of the proposed development on the following properties:

2 Priory Terrace	26 Priory Terrace	123 Belsize Road
4 Priory Terrace	28 Priory Terrace	125 Belsize Road
6 Priory Terrace	30 Priory Terrace	127 Belsize Road
8 Priory Terrace	32 Priory Terrace	129 Belsize
10 Priory Terrace	34 Priory Terrace	Wingreen
12 Priory Terrace	36 Priory Terrace	Sanbourne
14 Priory Terrace	143 Abbey Road	Abbey Road Phase 1
16 Priory Terrace	126 Abbey Road	181 Belzine Road
18 Priory Terrace	Flat 1 -102 Snowman	1 Priory Terrace
20 Priory Terrace	House	3 Priory Terrace
22 Priory Terrace	Flat 1- 102 Casterbridge House	3a Priory Terrace
24 Priory Terrace		5 Priory Terrace

# Daylight to neighbouring properties

# VSC and NSL

11.2. The results of the VSC and NSL analyses of the neighbouring properties are tabulated in Appendix 4 and summarised in Table 16 and Table 17 below.

Table 16 - Number of rooms experiencing VSC effects as a result of the proposed development

Address	Total number of windows tested	Number of windows meeting VSC guidelines	Number of windows with impacts beyond VSC guidelines
2 Priory Terrace	2	2	-
4 Priory Terrace	2	2	_
6 Priory Terrace	15	15	
8 Priory Terrace	6	6	<u>-</u>
10 Priory Terrace	7	6	11
12 Priory Terrace	7	4	3
14 Priory Terrace	12	10	2
16 Priory Terrace	12	12	-
18 Priory Terrace	9	9	_
20 Priory Terrace	9	9	_
22 Priory Terrace	8	8	-
24 Priory Terrace	9	9	-
26 Priory Terrace	9	9	-
28 Priory Terrace	9	9	-
30 Priory Terrace	9	9	-
32 Priory Terrace	9	9	-
34 Priory Terrace	9	9	<u>-</u>
36 Priory Terrace	8	5	3
143 Abbey Road	13	12	1
126 Abbey Road	9	9	-
124 Abbey Road	9	9	



Address	Total number of windows tested	Number of windows meeting VSC guidelines	Number of windows with impacts beyond VSC guidelines
Flat 1 to 102 Snowman House	136	136	-
Flat 1 to 102 Casterbridge	306	302	4
123 Belsize Road	14	14	-
125 Belsize Road	10	10	-
127 Belsize Road	14	14	-
129 Belsize Road	15	15	-
Wingreen	52	52	-
Sandbourne	36	36	-
Abbey Rd_	199	119	80
181 Belsize Road	6	6	-
1 Priory Terrace	5	5	-
3 Priory Terrace	5	5	-
3a Priory Terrace	5	5	_
5 Priory Terrace	5	5	_
Total	990	896	94

11.3. Of the 990 windows of habitable rooms assessed in the 35 neighbouring properties, 896 (90%) would satisfy the VSC guidelines.

Table 17 - Number of rooms experiencing NSL effects as a result of the proposed development

Address	Total number of rooms tested	Number of rooms meeting NSL guidelines	Number of rooms with impacts beyond NSL guidelines
2 Priory Terrace	11	1	
4 Priory Terrace	2	2	-
6 Priory Terrace	6	6	-
8 Priory Terrace	4	3	1
10 Priory Terrace	5	3	2
12 Priory Terrace	4	2	2
14 Priory Terrace	8	6	2
16 Priory Terrace	8	6	2
18 Priory Terrace	8	8	-
20 Priory Terrace	8	8	-
22 Priory Terrace	6	6	-
24 Priory Terrace	8	8	-
26 Priory Terrace	8	6	2
28 Priory Terrace	8	6	2
30 Priory Terrace	8	5	3
32 Priory Terrace	8	5	3
34 Priory Terrace	7	3	4
36 Priory Terrace	8	6	2
143 Abbey Road	9	9	-
126 Abbey Road	7	7	-
124 Abbey Road	7	7	-
Flat 1 to 102 Snowman House	102	91	11
Flat 1 to 102 Casterbridge	204	204	-
123 Belsize Road	10	10	_
125 Belsize Road	6	6	_
127 Belsize Road	10	10	-
129 Belsize Road	10	10	-
Wingreen	28	28	-
Sandbourne	23	23	-
Abbey Rd_	164	118	46



Address	Total number of rooms tested	Number of rooms meeting NSL guidelines	Number of rooms with impacts beyond NSL guidelines
181 Belsize Road	4	4	-
1 Priory Terrace	4	4	-
3 Priory Terrace	3	3	_
3a Priory Terrace	3	3	_
5 Priory Terrace	3	3	_
Total	712	630	82

- 11.4. Of the 712 Habitable Rooms assessed in the 35 neighbouring properties 630 (88%) would satisfy the NSL guidelines.
- 11.5. The impacts on VSC and NSL would full satisfy the BRE guidelines for the following properties:

2 Priory Terrace	126 Abbey Road	Sandbourne
4 Priory Terrace	124 Abbey Road	181 Belsize Road
6 Priory Terrace	123 Belsize Road	1 Priory Terrace
18 Priory Terrace	125 Belsize Road	3 Priory Terrace
20 Priory Terrace	127 Belsize Road	3a Priory Terrace
22 Priory Terrace	129 Belsize Road	5 Priory Terrace
24 Priory Terrace	Wingreen	

11.6. The impacts on VSC and NSL would not fully satisfy the BRE guidelines for the following properties and are examined in further detail:

8 Priory Terrace	26 Priory Terrace	143 Abbey Road
10 Priory Terrace	28 Priory Terrace	Flat 1-102 Snowman House
12 Priory Terrace	30 Priory Terrace	Flat 1-102
14 Priory Terrace	32 Priory Terrace	Casterbridge
16 Priory Terrace	34 Priory Terrace	Abbey Road Phase 1

- 11.7. Of the 7 properties that would not satisfy VSC the BRE guidelines, 2 would satisfy the NSL assessment. Conversely, of the 13 properties that would not satisfy NSL the BRE guidelines, 8 would satisfy VSC guidance. This means only 5 properties will not meet either criterion.
- 11.8. Of the overall VSC results, 47 (5%) windows of the 990 windows assessed will only incur a low adverse impact due to the development's completion. If these were to be included with the 897 windows that do meet the criteria, 96% of neighbour windows will meet guidance or only incur a low adverse impact.
- 11.9. Of the overall NSL results, 32 (4%) rooms of the 712 habitable rooms assessed will incur a low adverse impact due to the development's completion. If these were to be included with the 633 rooms that do meet the criteria, 93% of neighbouring rooms will meet guidance or only incur a low adverse impact.
- 11.10.Only one building will see low, medium and high adverse impacts regarding VSC and NSL, Abbey Rd Phase 1. Considering VSC, 35 (18%) windows will see a low negative impact, 35 (18%) windows will see a medium adverse impact, and 11 (6%) will see a high negative impact. This means 59%, leaving an overall pass rate of 59% windows. Considering NSL, 13 (8%) rooms will see a low adverse impact, 11 (7%) windows will see a medium adverse impact, and 22 (13%) will see a high adverse impact. This means there is an overall pass rate of 72% of rooms. the 7 properties that would not satisfy VSC the BRE guidelines, 2 would satisfy the NSL assessment. Of



the 13 properties that would not satisfy NSL the BRE guidelines, 8 would satisfy VSC guidance. This means only 5 properties will not meet either criteria.

#### ADF (supplementary test)

11.11.The results of the supplementary daylight test for ADF are tabulated in Appendix B and summarised in Table 18 below.

Table 18 - Number of rooms experiencing ADF effects as a result of the proposed development

Address	Total number of rooms tested	Number of rooms meeting ADF guidelines	Number of rooms below ADF guidelines
2 Priory Terrace	1	1	-
4 Priory Terrace	2	11	1
6 Priory Terrace	6	5	<del>-</del>
8 Priory Terrace	4	3	1
10 Priory Terrace	5	2	3
12 Priory Terrace	4	0	4
14 Priory Terrace	8	4	4
16 Priory Terrace	8	4	4
18 Priory Terrace	8	7	1
20 Priory Terrace	8	7	1
22 Priory Terrace	6	4	2
24 Priory Terrace	8	2	6
26 Priory Terrace	8	1	7
28 Priory Terrace	8	1	7
30 Priory Terrace	8	3	5
32 Priory Terrace	8	2	6
34 Priory Terrace	7	2	5
36 Priory Terrace	8	0	8
143 Abbey Road	9	3	6
126 Abbey Road	7	7	-
124 Abbey Road	7	7	-
Flat 1 to 102 Snowman	102	101	1
Flat 1 to 102 Casterbridge	204	167	37
123 Belsize Road	10	8	2
125 Belsize Road	6	3	3
127 Belsize Road	10	6	4
129 Belsize Road	10	4	6
Wingreen	28	24	4
Sandbourne	23	23	
Abbey Rd_	164	118	46
181 Belsize Road	4	4	-
1 Priory Terrace	4	4	
3 Priory Terrace	3	3	-
3a Priory Terrace	3	3	-
5 Priory Terrace	3	3	-
Total	712	537	174

- 11.12. Table 18 shows that of the 712 rooms assessed in 35 neighbouring properties, 537 rooms (76%) would satisfy the BRE guidelines for ADF.
- 11.13.157 (22%) habitable rooms assessed that do not meet guidance only incur a low adverse impact with the exception of one. If these were to be included with the 537 rooms that meet the criteria, 93% of neighbouring rooms will meet guidance or only incur a low adverse impact. Abbey Rd Phase 1 will incur a low adverse impact on 29 rooms (18%) and a medium adverse impact on 17



- rooms (10%). 118 rooms (72%) will meet the BRE guidelines. Showing ADF, as a supplementary assessment, results at a much higher level than that of VSC and NSL.
- 11.14.Of the windows that do not satisfy the VSC criteria, 49 will only incur a minor transgression. Meaning that 945 windows will satisfy the guidance or only incur a minor transgression. Increasing the percentage from 91% to 95%. Of the rooms that do not satisfy the NSL criteria, 33 would only incur a minor transgressions. Meaning that 663 would satisfy the BRE guidance or only incur a minor transgression, increasing the overall percentage from 88% to 93%.

#### Sunlight to neighbouring properties

11.15. The results of the annual and winter sunlight analyses are tabulated in Appendix B and summarised Table 19 below.

Table 19 - Number of rooms experiencing APSH effects as a result of the proposed development

Address	Total number of windows tested	Number of windows meeting APSH guidelines	Number of windows with impacts beyond APSH guidelines
2 Priory Terrace	-	-	-
4 Priory Terrace	-	-	-
6 Priory Terrace	3	3	-
8 Priory Terrace	2	2	-
10 Priory Terrace	3	3	
12 Priory Terrace	2	2	
14 Priory Terrace	8	8	
16 Priory Terrace	8	8	
18 Priory Terrace	-	-	
20 Priory Terrace	-	-	-
22 Priory Terrace	1	1	-
24 Priory Terrace	8	8	-
26 Priory Terrace	8	8	-
28 Priory Terrace	8	8	-
30 Priory Terrace	4	4	-
32 Priory Terrace	8	8	-
34 Priory Terrace	6	6	-
36 Priory Terrace	8	8	-
143 Abbey Road	4	4	-
126 Abbey Road	3	3	-
124 Abbey Road	1	1	-
Flat 1 to 102 Snowman	-	-	-
Flat 1 to 102 Casterbridge	34	34	-
123 Belsize Road	-	-	-
125 Belsize Road	-	-	-
127 Belsize Road	-	-	-
129 Belsize Road	-	-	-
Wingreen	-	-	-
Sandbourne	-	-	-
Abbey Rd_	-	-	-
181 Belsize Road	-	-	-
1 Priory Terrace	3	3	-
3 Priory Terrace	2	2	-
3a Priory Terrace	2	2	-
5 Priory Terrace	2	2	-
Total	128	128	-

**Table 19** shows that of the 128 rooms assessed in 35 neighbouring properties, 128 rooms (100%) would satisfy the BRE guidelines for both annual and winter APSH.



#### 12. Conclusion

- 12.1. We assessed the daylight and sunlight provision to the new dwellings and sunlight to amenity spaces within the proposed development. We also assessed the potential effects of the proposed development on daylight and sunlight to surrounding residential properties and amenity spaces.
- 12.2. We ran our assessments using methodologies recommended in the BRE guide.
- 12.3. The advice contained in the BRE guide is not mandatory, and its numerical guidelines should be interpreted flexibly.
- 12.4. As the development contains housing, I refer to the NPPR and the Mayor of London's Housing SPG, which emphasise the need for flexible application of the BRE guidelines.
- 12.5. Camden's local planning policy specifically acknowledges that the BRE guidance has been developed with lower density suburban situations in mind and that the numerical guidelines should therefore be operated more flexibly in dense inner-urban locations within the borough.
- 12.6. The overall daylight adherence within the development is 74% for ADF and 71% for NSL, considering the alternative target guidance. For sunlight, the adherence percentage is 74% for the alternative target guidance. Many non-adherence results for both Daylight and Sunlight are the inclusion of inset or protruding balconies.
- 12.7. The overall daylight adherence considering the impact on neighbouring properties is 91% for VSC and 88% for NSL. Both are high levels of adherence. In respect of sunlight, the overall adherence is 100%.
- 12.8. In conclusion, it is submitted that the layout of the proposed development is consistent with the Council's local planning policy on daylight and sunlight, particularly having regard to paragraph 123(c) of the National Planning Policy Framework and paragraphs 1.3.45 and 1.3.46 of the Mayor of London's Housing SPG.

**Delva Patman Redler LLP**Chartered Surveyors

# **Appendix 1**

# Assessment methodology and glossary

1. This appendix explains the daylight and sunlight assessment methodology recommended in BRE Report 209, 'Site Layout Planning for Daylight and Sunlight: A guide to good practice' (2011) and provides a glossary of the terminology used.

#### Assessment methodology

#### Daylight and sunlight in new development

Daylight to new dwellings

Vertical sky component (VSC)

- 2. At the very early stages in design and at outline planning application stage, when room layouts and window locations may be undecided, daylight availability may be checked by calculating the VSC at a series of points on each main face of the building.
- 3. Although the BRE guide recommends setting the calculation points at 1.6 m above the ground (or base of the lowest storey) and no more than 5 m apart, with computer software it is possible to set up a grid of points across the facades.
- 4. The guide advises that if the VSC is found to change rapidly along a façade it is worthwhile, if possible, siting windows where most daylight is available.
- 5. The amount of daylight a room needs depends on what it is being used for. But roughly speaking, if the VSC is:
  - at least 27% (obstruction angle less than 25°), conventional window design will usually give reasonable results:
  - between 15% and 27% (obstruction angle between 25° and 45°), special measures (for example, larger windows or changes to room layout) might be needed to provide adequate daylight:
  - between 5% and 15% (obstruction angle between 45° and 65°), it is very difficult to provide adequate daylight unless very large windows and/or light internal surface finishes are used;
  - less than 5% (obstruction angle greater than 65°), it is often impossible to achieve reasonable daylight, even if the whole window wall is glazed.

Average daylight factor (ADF)

- 6. The BRE guide advises that daylight provision in new rooms can be checked using the average daylight factor (ADF). The ADF is a measure of the overall amount of daylight in a space.
- 7. Living rooms and kitchens need more daylight than bedrooms. Areas without a special requirement for daylight, like bathrooms, stairwells, garages and storage areas, need not be assessed.
- 8. Appendix C of the BRE guide gives guidance on how to calculate the ADF. Where there are multiple windows, the ADF due to each one can be added together. The ADF due to each window can be calculated using the following formula:

$$ADF = \frac{TMA_w\theta}{A(1 - R^2)}$$

where:

*T* is the diffuse visible transmittance of the glazing (for clean, clear double glazing with a low emissivity coating, a value of 0.68 can be used);

M is a maintenance factor, allowing for the effects of dirt;



- $A_W$  is the net glazed area of the window (m<sup>2</sup>);
- A is the total area of the room surfaces: ceiling, floor, walls and windows (m<sup>2</sup>);
- *R* is their average reflectance based on the reflectances of the room finishes (if room finishes are not known a default value of 0.5 can be taken for fairly light-coloured rooms);
- $\theta$  is the angle of visible sky in degrees, measured from a point halfway between the inner and outer faces of the window wall.
- 9. Of these quantities, only θ depends on external obstruction. It can be directly related to the vertical sky component (VSC), which can be calculated using the Waldram diagram method explained in Appendix B of the BRE guide. Our computer software uses this calculation method and converts the VSC value to an equivalent angle of visible sky for use in the ADF formula.
- 10. A special procedure is required for floor to ceiling windows such as patio doors. If part of a window is below the height of the working plane (a horizontal plane 0.85 m above the floor in housing), this portion should be treated as a separate window. The ADF for this window has an extra factor applied to it, to take account of the reduced effectiveness of low-level glazing in lighting the room. A value equal to the floor reflectance may be taken for this factor, if this is known. If room reflectances are not known, a value of 0.15 can be taken. The ADF for the portion of the window above the working plane is calculated in the normal way without this additional factor, and the ADFs for the two portions are added together.
- 11. The BRE guide gives minimum values of ADF in housing of 2% for kitchens, 1.5% for living rooms and 1% for bedrooms. It notes that with a higher ADF, indoor daylight will be sufficient for more of the year. So, although the minimum values can be used as targets for daylight in obstructed situations, achieving higher levels will give improved daylight provision.
- 12. The BRE guide advises that non-daylit internal kitchens should be avoided wherever possible, especially if the kitchen is used as a dining area too. It suggests that if the layout means that a small internal galley-type kitchen is inevitable, it should be directly linked to a well-daylit living room.

Additional recommendations: room depth and no-sky line (RDC and NSL)

- 13. Appendix C of the BRE guide makes two additional recommendations beyond ADF.
- 14. Firstly, the guide advises that if a daylit room is lit by windows in one wall only, the depth of the room, L, should not exceed the limiting value given by the following room depth criterion (RDC) formula:

$$\frac{L}{W} + \frac{L}{H} < \frac{2}{(1 - R_h)}$$

Where:

Wis the room width

*H* is the window head height above floor level

 $R_b$  is the average reflectance of surfaces in the rear half of the room.

- 15. If L exceeds this value, the rear half of the room will tend to look gloomy and supplementary electric lighting will be required. For a typical room in a dwelling, where W = 4 m, H = 2.4 m and  $R_b = 0.5$ , the limiting depth L is just over 5 m.
- 16. Secondly, the guide advises that if a significant area of the working plane (normally more than 20%) lies beyond the no sky line (NSL) and receives no direct skylight, the distribution of daylight in the room will look poor and supplementary electric lighting will be required. Therefore, at least 80% of the area of the working plane in a room should lie within the no-sky line and receive direct skylight.
- 17. Our computer software plots the NSL within our 3D computer model and calculates the percentage of the room area with a view of sky from the working plane.



#### Sunlight to new dwellings

#### 18. The BRE guide states:

In housing, the main requirement for sunlight is in living rooms, where it is valued at any time of day but especially in the afternoon. Sunlight is also required in conservatories. It is viewed as less important in bedrooms and in kitchens, where people prefer it in the morning rather than the afternoon.

Sensitive layout design of flats will attempt to ensure that each individual dwelling has at least one main living room which can receive a reasonable amount of sunlight.

The overall sunlighting potential of a large residential development may be initially assessed by counting how many dwellings have a window to a main living room facing south, east or west. The aim should be to minimise the number of dwellings whose living rooms face solely north, north east or north west, unless there is some compensating factor such as an appealing view to the north.

- 19. In general, a dwelling will appear reasonably sunlit if at least one main window wall faces within 90° of due south and the centre of at least one window to a main living room can receive 25% of annual probable sunlight hours (**APSH**), including at least 5% of APSH in the winter months between 21 September and 21 March.
- 20. Where groups of dwellings are planned, site layout design should aim to maximise the number of dwellings that meet this recommendation.
- 21. Although the criteria applies to rooms of all orientations, if a room faces significantly north of due east or west, the guide notes they are unlikely to be met.
- 22. When calculating the APSH, the BRE guide advises that:
  - ... the centre of each main living room window can be used for the calculation. In the case of a floor-to-ceiling window such as a patio door, a point 1.6 m above ground on the centre line of the window may be used.

# 23. It also advises that:

... a point on the inside face of the window wall should be taken. Sunlight blocked by the window reveals should not be included, but the effect of the window frames in blocking sunlight need not be taken into account. If a room has multiple windows on the same wall or on adjacent walls, the highest value of APSH should be taken. If a room has two windows on opposite walls, the APSH due to each can be added together.

24. In rooms with multiple windows, our computer software calculates the total APSH across all windows.

#### Sunlight to new gardens and amenity spaces

- 25. Sunlight should be assessed on the equinox (21 March) to new amenity spaces within proposed development, including private or shared gardens, children's playgrounds, and sitting-out areas, such as in public squares.
- 26. The assessment measures the percentage of each new amenity area that can receive at least two hours of sunlight on 21 March the 'two-hours sun-on-ground' (**SOG**) test. At least 50% of each amenity area should be able to receive at least two hours of direct sunlight on 21 March.
- 27. Sunlight at an altitude of 10° or less is ignored, because it is likely to be blocked by planting, and fences or walls less than 1.5 metres high can also be ignored. Front gardens, driveways and hard standing for cars are usually omitted. Normally, trees and shrubs need not be included, partly because their shapes are almost impossible to predict, and partly because the dappled shade of a tree is more pleasant than a deep shadow of a building.



### Daylight and sunlight to neighbouring buildings and amenity spaces

#### Daylight to neighbouring buildings

#### 28. The BRE guide states:

In designing a new development or extension to a building, it is important to safeguard the daylight to nearby buildings.

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. The guidelines may also be applied to any existing non-domestic building where the occupants have a reasonable expectation of daylight; this would normally include schools, hospitals, hotels and hostels, small workshops and some offices.

- 29. To quantify the impact of development on daylight to a building, the BRE guide recommends two tests:
  - a) calculating the vertical sky component (VSC) at the centre of each main window on the outside plane of the window wall, to measure the total amount of skylight available to the window; and
  - b) plotting the no-sky line (**NSL**) on the working plane inside a room, where layouts are known, and measuring the area that can receive direct skylight, to assess the distribution of daylight around the room.
- 30. The VSC measures the skylight available at the window. The guide states:

Any reduction in the total amount of skylight can be calculated by finding the VSC at the centre of each main window ... For a bay window, the centre window facing directly outwards can be taken as the main window. If a room has two or more windows of equal size, the mean of their VSCs may be taken. The reference point is in the external plane of the window wall. Windows to bathrooms, toilets, storerooms, circulation areas and garages need not be analysed.

#### 31. The NSL test is described thus:

Where room layouts are known, the impact on the daylighting distribution in the existing building can be found by plotting the 'no sky line' in each of the main rooms. For houses this would include living rooms, dining rooms and kitchens; bedrooms should also be analysed although they are less important. In non-domestic buildings each main room where daylight is expected should be investigated. The no sky line divides points on the working plane which can and cannot see the sky.

- 32. If, following development, the VSC to a neighbouring window will be greater than 27% then enough skylight should still be reaching the window. Any reduction below this level should be kept to a minimum. If the VSC will be both less than 27% and less than 0.8 times its former value, occupants of the existing building will notice the reduction in the amount of skylight. The area lit by the window is likely to appear more gloomy and electric lighting will be needed more of the time.
- 33. If, following development, the no-sky line moves so that the area of the existing room that can receive direct skylight will be reduced to less than 0.8 times its former value, this will be noticeable to the occupants and more of the room will appear poorly lit. This is also true if the no-sky line encroaches on key areas like kitchen sinks and worktops.
- 34. A third daylight test in the BRE guide is the average daylight factor (**ADF**), which assesses the average level of daylight inside a room. It is a detailed calculation that takes account of window and room parameters, including the net glazed area of each window (after discounting frames and glazing bars), the diffuse light transmittance of the glazing, the total surface area of the room, and the reflectance of those surfaces, plus the amount of sky visible at each of the windows. It is therefore primarily intended for assessing daylight within proposed buildings, where such parameters can be



- readily established. It may also be used to assess neighbouring consented development that is not yet built and could be affected by the proposed development.
- 35. Using the ADF test for existing neighbouring buildings can potentially be a useful supplementary test to aid a more rounded and balanced judgement on the acceptability of VSC and NSL effects, as the post-development retained ADF values may be checked against the minimum recommendations for new dwellings. These are 1% in bedrooms, 1.5% in living rooms and 2% in kitchens.

#### Sunlight to neighbouring buildings

36. The BRE guide states:

To assess loss of sunlight to an existing building, it is suggested that all main living rooms of dwellings, and conservatories, should be checked if they have a window facing within 90° of due south. Kitchens and bedrooms are less important, although care should be taken not to block too much sun.

A point at the centre of the window on the outside face of the window wall may be taken [as the calculation point].

37. To quantify the available sunlight, the BRE guide advises measuring the percentage of annual probable sunlight hours (**APSH**), which is defined as follows:

'probable sunlight hours' means the total number of hours in the year that the sun is expected to shine on unobstructed ground, allowing for average levels of cloudiness for the location in question.

- 38. The assessment calculates the percentage of APSH over the whole year (annual sunlight) and between 21 September and 21 March (winter sunlight).
- 39. If, following development, the APSH to a neighbouring window will be greater than 25%, including at least 5% of APSH in the winter months between 21 September and 21 March, then the room should still receive enough sunlight. Any reduction in sunlight access below this level should be kept to a minimum.
- 40. If the available sunlight hours will be both less than the above amounts and less than 0.8 times their former value, either over the whole year or just in the winter months, then the occupants of the building will notice the loss of sunlight; if the overall annual loss is greater than 4% of APSH, the room may appear colder and less cheerful and pleasant.

Sunlight to neighbouring gardens and amenity spaces

- 41. Sunlight should be assessed on the equinox (21 March) to main back gardens of houses, allotments, parks and playing fields, children's playgrounds, outdoor swimming pools, sitting-out areas, such as in public squares and focal points for views, such as a group of monuments or fountains.
- 42. The assessment measures the percentage of each area that can receive at least two hours of sunlight on 21 March the 'two-hours sun-on-ground' (**SOG**) test.
- 43. It is recommended that at least half of the area of a garden or amenity space should be able to receive at least two hours of sunlight on 21 March. If such a space is already heavily obstructed, then any further loss of sunlight should be kept to a minimum. In this poorly sunlit case, if, following development, the area which can receive two hours of direct sunlight on 21 March is reduced to less than 0.8 times its former size, this loss of sunlight is likely to be noticeable. In such cases the garden or amenity area will tend to look more heavily overshadowed.
- 44. Sunlight at an altitude of 10° or less is ignored, because it is likely to be blocked by planting, and fences or walls less than 1.5 metres high can also be ignored. Front gardens, driveways and hard standing for cars are usually omitted. Normally, trees and shrubs need not be included, partly because their shapes are almost impossible to predict, and partly because the dappled shade of a tree is more pleasant than a deep shadow of a building.



# **Glossary of terms**

45. The daylight and sunlight terminology used in our report is explained below.

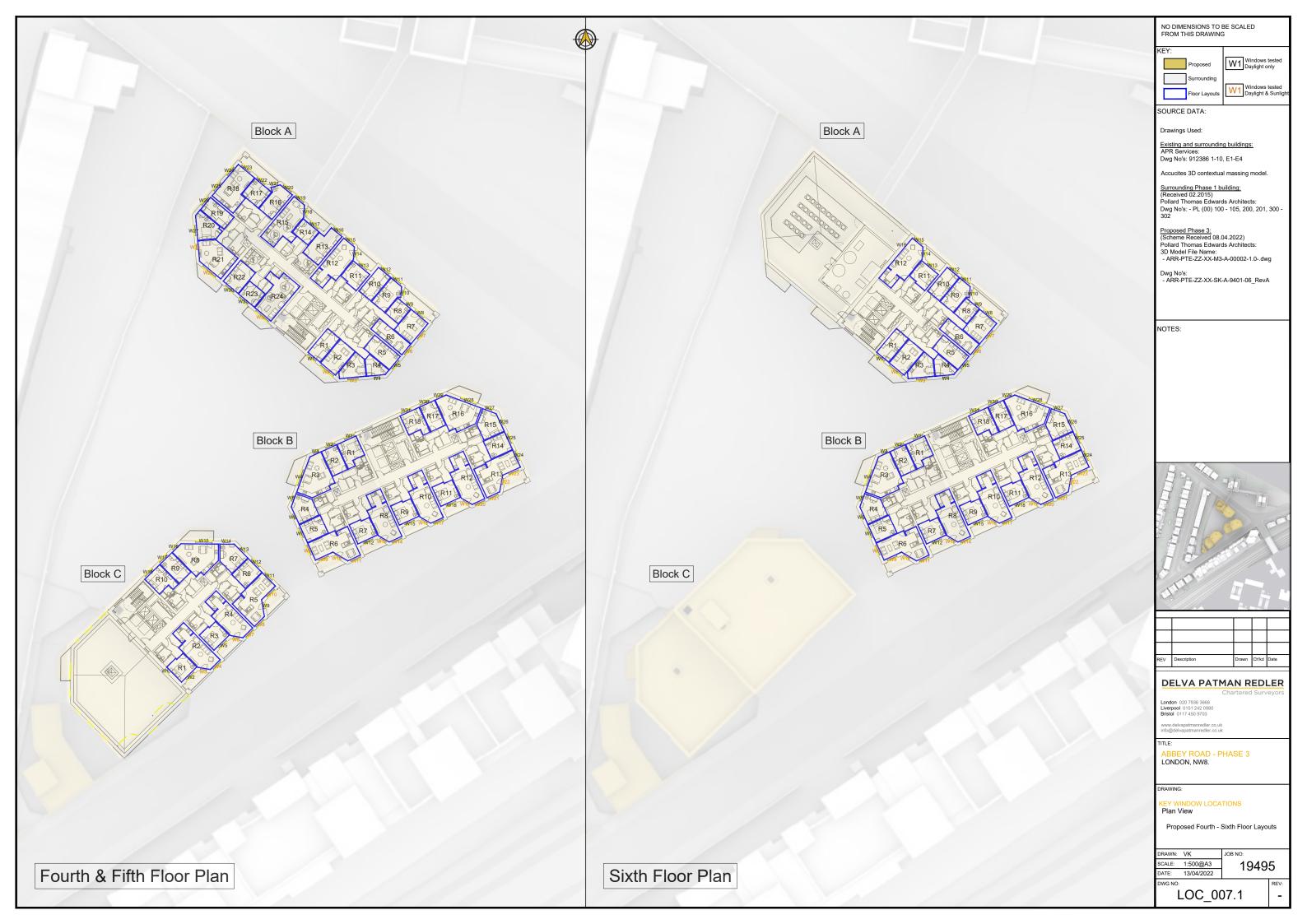
Term	Meaning
Annual probable sunlight hours ( <b>APSH</b> )	The long-term average of the total number of hours during a year in which direct sunlight is expected to shine on the unobstructed ground, allowing for average levels of cloudiness for the location in question.
Average daylight factor (ADF)	Ratio of total daylight flux incident on the working plane to the area of the working plane, expressed as a percentage of the outdoor illuminance on a horizontal plane due to an unobstructed CIE standard overcast sky. Thus a 1% ADF would mean that the average indoor illuminance would be one hundredth the outdoor unobstructed illuminance.
Daylight	Combined skylight and sunlight.
No-sky line ( <b>NSL</b> )	The outline on the working plane of the area from which no sky can be seen. It divides points on the working plane which can and cannot see the sky.
Obstruction angle	The angular altitude of the top of an obstruction above the horizontal, measured from a reference point in a vertical plane in a section perpendicular to the vertical plane.
Room depth criterion (RDC)	The limiting depth of a room for good daylighting, where it is lit from one side only. The limiting depth is a factor of the window head height above floor level, the room width, and the average reflectance of surfaces in the rear half of the room (away from the window). Sunlight below an angle of
Sky factor	Ratio of the parts of illuminance at a point on a given plane that would be received directly through unglazed openings from a sky of uniform luminance, to illuminance on a horizontal plane due to an unobstructed hemisphere of this sky. The sky factor does not include reflected light, either from outdoor or indoor surfaces.
Sun on ground (SOG)	The measure of sunlight potential to gardens and amenity spaces. It is measured in hours on the spring equinox (21 March) at a point on the ground accounting for the latitude of the site location. Sunlight below an altitude of 10° is usually discounted as it is likely to be prevented from reaching the ground by fences, plants or other low-level obstructions.
Vertical sky component (VSC)	The amount of daylight falling on a vertical wall or window. It is the ratio of that part of illuminance, at a point on a given vertical plane (e.g. window), that is received directly from a CIE standard overcast sky, to simultaneous illuminance on a horizontal plane due to an unobstructed hemisphere of this sky. The VSC does not include reflected light, either from the ground or from other buildings.
	The ratio is usually expressed as a percentage. The maximum value is almost 40% for a completely unobstructed vertical wall.
Working plane	Horizontal, vertical or inclined plane in which a visual task lies. Normally the working plane may be taken to be horizontal, 0.85 m above the floor in housing.



# Appendix 2

# **Location drawings**

Site location plan Spot-height drawings Window maps Room location plans









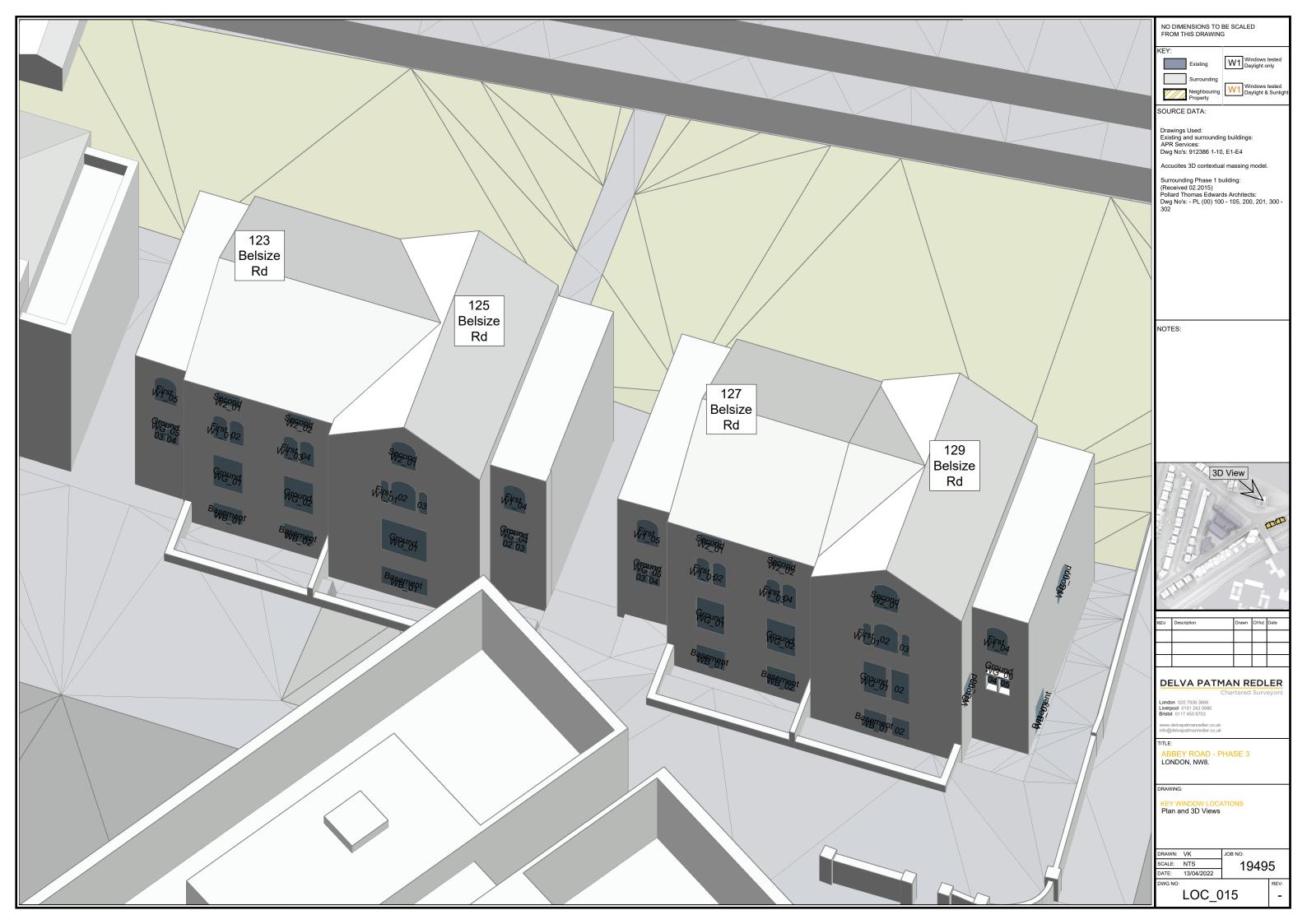


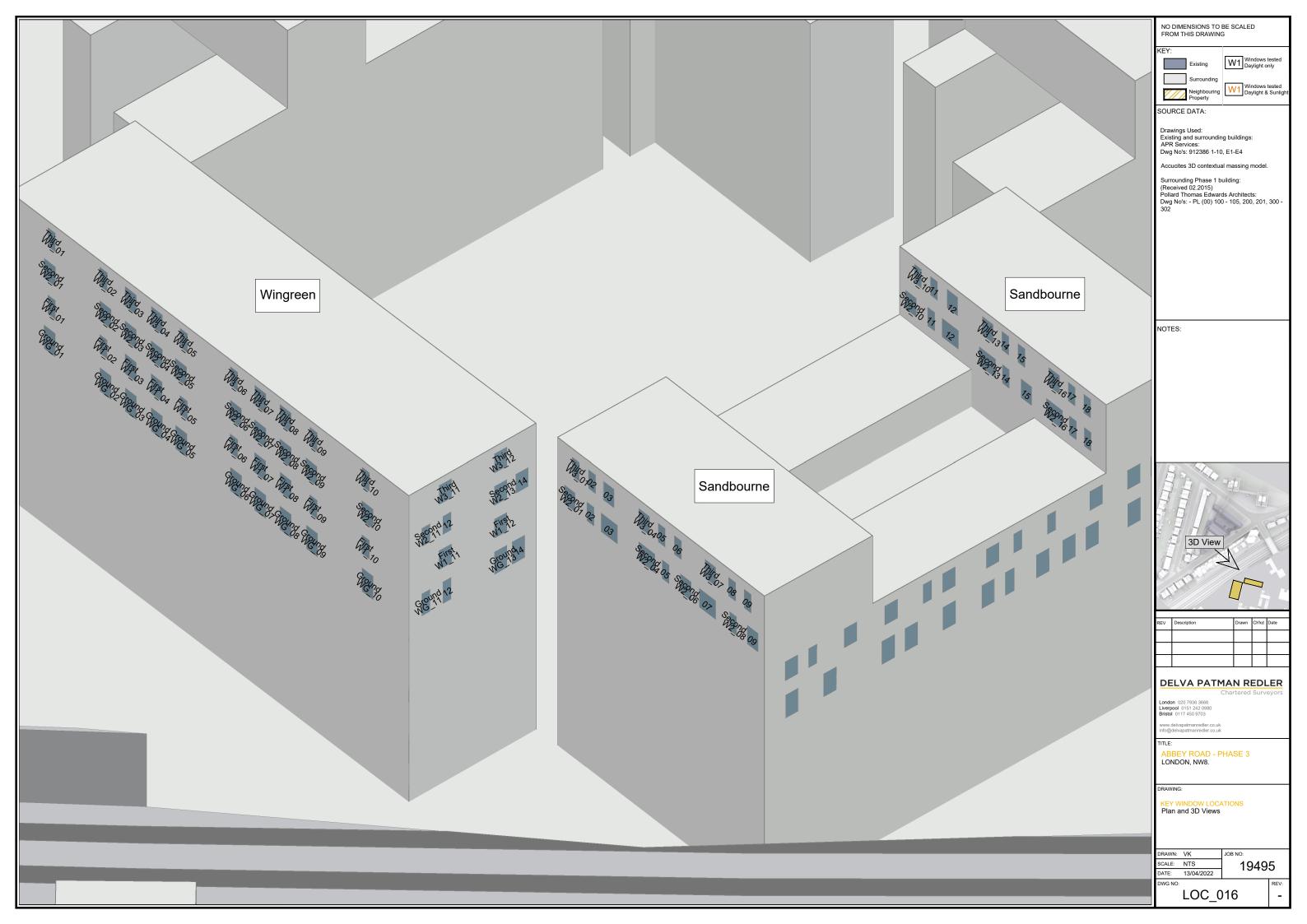


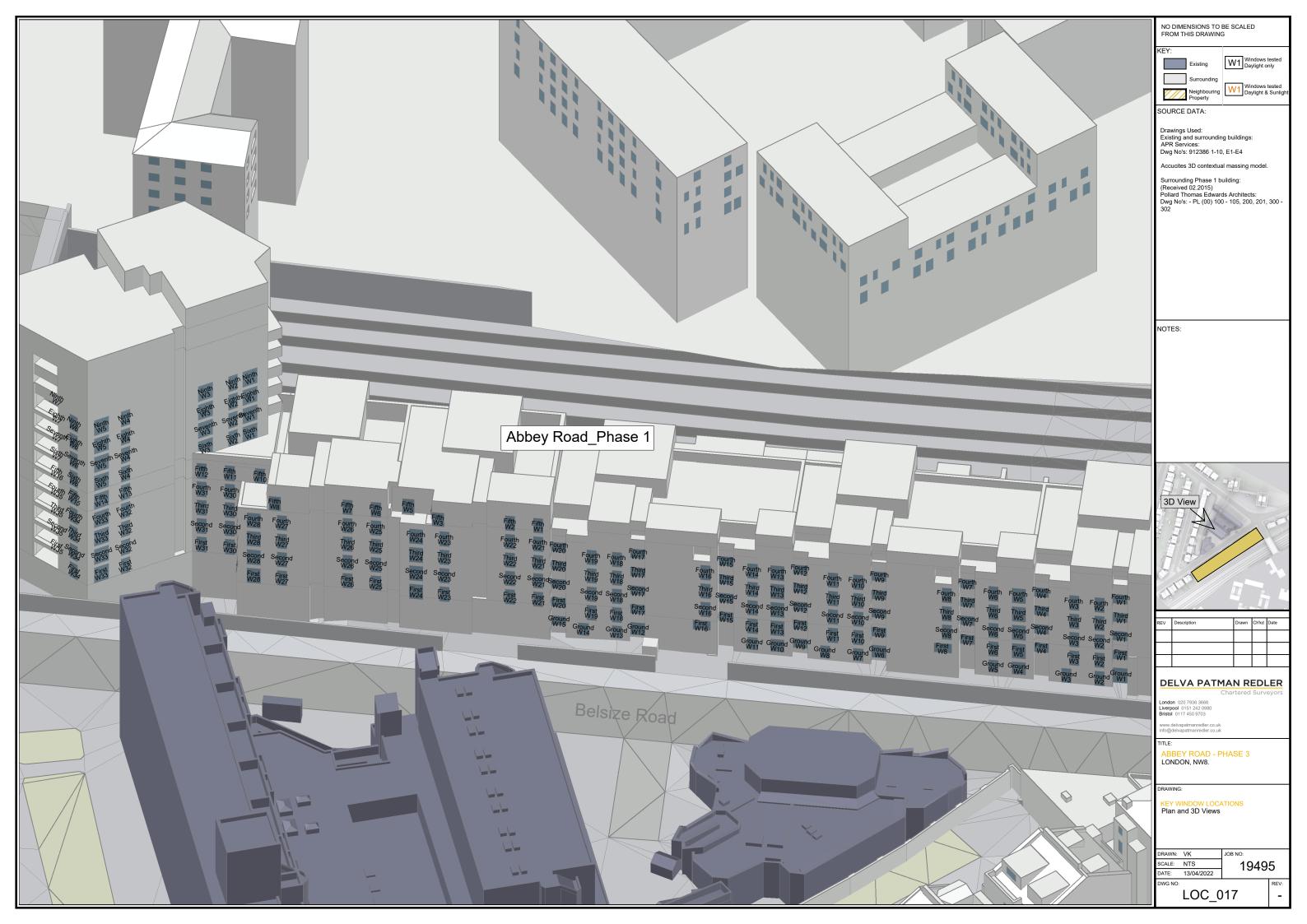
















### **Appendix 3**

Daylight and sunlight results for proposed dwellings

Proper	rty, room & window attributes  Flat no. Room Property type Room u							Day	light (B	RE)		Sunligh	t (BRE	)	Al	OF .		APSH	
Поли	[]-t	Room	Daniel and the form	D	V	Vindow		Large	ADF		AP win Annu	dow	APSH Annua	l room		Short-		Sho	rtfall winte
Floor	Flat no.	ref.	Property type	Room use	Ref. 8	Orientat	ion	Targe t	win	ADF (%)	al		1	r	s BRE?	fall (ADF%)	s BRE?		r
								/0 <u>/</u> _\	/0/_1	(* -/	10/_1	10/_1	/0/ <u>/</u> \	(%)				(0/2)	/0/_\
	A Propos		<b>D</b> 11 41	1/5	14/4				0.70										
Ground	Plan(s)	R1	Residential	KD	W1 W2	40°N 40°N	7		0.73 0.26		2	0							
					W3	310°N	Γ,		1.51		4	0							
								2.0		2.50			6	0	Yes	-	No	19	5
	Plan(s)	R2	Residential	Bedroom	W4	310°N	⋉		1.94		4	0							
								1.0		1.94			4	0	Yes	-	No	21	5
	Plan(s)	R3	Residential	Bedroom	W5	310°N	K	1.0	1.77	1.77	4	0	4	0	Yes	-	No	21	5
	Plan(s)	R4	Residential	Bedroom	W6	265°	<b>←</b>	1.0	1.82	1.77	20	5	4	0	162	-	INO	21	5
	- (-)							1.0		1.82			20	5	Yes	-	Win only	5	0
	Plan(s)	R5	Residential	Living Room	W7	265°	<b>←</b>		1.43		25	5							
					W8	220°	Ľ		1.44		35	13							
	DI ()		5	5.	1440			1.5		2.87	0	_	36	13	Yes	-	Yes	-11	-8
	Plan(s)	R6	Residential	Bedroom	W9	220°	Ľ	1.0	0.83	0.83	8	7	8	7	No	0.17	Win only	17	-2
	Plan(s)	R7	Residential	LKD	W10	275°N	<b>←</b>	1.0	0.43	0.03	14	0		,	140	0.17	vviii Oiliy	17	-2
	(-)				W11	220°	ĸ		1.25		33	9							
								2.0		1.67			34	9	No*	0.33	Yes	-9	-4
First	Plan(s)	R1	Residential	Bedroom	W1	220°	Ľ		1.26		15	8							
	<b>5</b> 1 ()		5 11 21	5	14/0			1.0	. =0	1.26			15	8	Yes	-	Win only	10	-3
	Plan(s)	R2	Residential	Living Room	W2	220°	Ľ	1.5	1.70	1.70	21	6	21	6	Yes	-	Win only	4	-1
	Plan(s)	R3	Residential	KD	W3	175°	<b>4</b>	1.5	0.81	1.70	6	3	21	0	162	-	WIII OIIIY	4	-1
	. (-)							2.0		0.81			6	3	No	1.19	No	19	2
	Plan(s)	R4	Residential	Bedroom	W4	175°	<b>4</b>		0.35		0	0							
								1.0		0.35			0	0	No	0.65	No	25	5
	Plan(s)	R5	Residential	Bedroom	W5	130°	7	4.0	0.99	0.00	13	1	40	4	NI	0.04	NI.	40	
	Plan(s)	R6	Residential	KD	W6	130°	N	1.0	1.15	0.99	18	2	13	1	No	0.01	No	12	4
	i idii(3)	110	residential	ND	****	130		2.0	1.10	1.15	70		18	2	No	0.85	No	7	3
	Plan(s)	R7	Residential	Living Room	W7	130°	7		1.32		22	2							
					W8	40°N	7		0.99		0	0							
								1.5		2.30			22	2	Yes	-	No	3	3
	Plan(s)	R8	Residential	Bedroom	W9	40°N	7	4.0	0.69	0.00	0	0	0	0	NI-	0.04	NIa	0.5	_
	Plan(s)	R9	Residential	Bedroom	W10	95°	<b>→</b>	1.0	0.51	0.69	7	2	0	0	No	0.31	No	25	5
	(0)		rtooraoriaa	200.00	W11	40°N	7		1.75		3	0							
								1.0		2.26			8	2	Yes	-	No	17	3
	Plan(s)	R10	Residential	Bedroom	W12	40°N	7		1.81		3	0							
	DI ()	F. :	D	D. I	1444-	,		1.0	c ==	1.81			3	0	Yes	-	No	22	5
	Plan(s)	R11	Residential	Rearoom	W13	40°N	7	1.0	0.95	0.95	1	0	1	0	No	0.05	No	24	5
		R12	Residential	LD	W14	95°	<b>→</b>	1.0	0.49	0.90	7	0		0	NO	0.05	TVU	24	5
					W15	40°N	7		1.29		4	0							
								1.5		1.78			7	0	Yes	-	No	18	5
	Plan(s)	R13	Residential	Bedroom	W16	40°N	7		1.34		3	0							
	Diam/-)	DAA	Desidential	Pod	10/47	4001	7	1.0		1.34	4	0	3	0	Yes	-	No	22	5
	Plan(s)	R14	Residential	bearoom	W17	40°N	7	1.0	1.11	1.11	1	0	1	0	Yes	-	No	24	5
	Plan(s)	R15	Residential	LKD	W18	95°	$\rightarrow$	1.0	0.35	1.11	6	0			163		140	2-1	J
	(-/				W19	40°N	71		0.99		2	0							
								2.0		1.34			6	0	No	0.66	No	19	5
	Plan(s)	R16	Residential	Bedroom	W20	40°N	7		1.52		2	0							
					W21	345°N	1	1.0	0.50	0.00	0	0	0	0	V		N1.	00	-
	Plan(s)	R17	Residential	Bedroom	W22	40°N	7	1.0	0.91	2.02	1	0	2	0	Yes	-	No	23	5
	(3)		Joider littl	200100111		70 14	, .	1.0	0.91	0.91	-		1	0	No	0.09	No	24	5
	Plan(s)	R18	Residential	LKD	W23	40°N	7		0.48		2	0							
					W24	310°N	K		1.34		6	0							
					W25	310°N	K		1.22		6	0							

Prope	rty, room	& wind	ow attributes					рау	light (B	KE)	AP		nt (BRE		
Floor	Flot no	Room	Dranarty type	Doom was	V	Vindow		Large	ADF			dow Winte	APSH Annua	room	Sat
Floor	Flat no.	ref.	Property type	Room use	Ref. &	Orienta	tion	t	win	ADF	al	r	I	r	BF
								2.0	(0/_)	(%)	(%)	(%)	(%) 8	(%) 0	Y
	Plan(s)	R19	Residential	Bedroom	W26	310°N	K	2.0	2.03	3.03	5	0	0		'
	1 1011(3)	1(13	residential	Dealoom	VV20	310 14		1.0	2.00	2.03			5	0	Y
	Plan(s)	R20	Residential	Bedroom	W27	265°	<b>←</b>	1.0	2.02	2.03	25	6	3	0	•
	1 1011(3)	1120	residential	Dealoom	VV21	203		1.0	2.02	2.02	20	0	25	6	Y
	Plan(s)	R21	Residential	IKD	W28	265°	<b>←</b>	1.0	0.68	2.02	19	2	20	0	•
	1 1011(3)	1121	residential	LIND	W29	220°	· Ľ		1.54		27	13			
					***20		Ē	2.0	1.01	2.22	_,	,,,	32	13	Y
	Plan(s)	R22	Residential	Bedroom	W30	220°	ĸ	2.0	1.90		41	16	02	.0	•
	(0)		rtoordornia	200.00				1.0		1.90		, ,	41	16	Y
	Plan(s)	R23	Residential	Bedroom	W31	220°	ĸ		2.52		39	12			-
	(-)							1.0		2.52			39	12	Y
	Plan(s)	R24	Residential	LKD	W32	220°	ĸ		1.40		28	14			
	(-)							2.0		1.40			28	14	1
Second	Plan(s)	R1	Residential	Bedroom	W1	220°	ĸ		1.35		17	10			
	(-)							1.0		1.35			17	10	Y
	Plan(s)	R2	Residential	Living Room	W2	220°	ĸ		1.83		22	7			
	(-)			<b>J</b>				1.5		1.83			22	7	Y
	Plan(s)	R3	Residential	KD	W3	175°	<b>4</b>		0.88		6	3			
	(-)						Ť	2.0		0.88			6	3	1
	Plan(s)	R4	Residential	Bedroom	W4	175°	<b>4</b>	2.0	0.39	0.00	0	0			
	(0)		rtooidoniidi	200.00		2,3	Ť	1.0	0.00	0.39	Ü		0	0	1
	Plan(s)	R5	Residential	Bedroom	W5	130°	7		1.00	0.00	13	1			
	(-)							1.0		1.00			13	1	Y
	Plan(s)	R6	Residential	KD	W6	130°	7		1.17		18	2			
	(-)							2.0		1.17			18	2	1
	Plan(s)	R7	Residential	Living Room	W7	130°	7		1.34		22	2			
	(-)			g	W8	40°N	7		1.01		0	0			
								1.5		2.35			22	2	Y
	Plan(s)	R8	Residential	Bedroom	W9	40°N	7		0.71		0	0			
	(-)							1.0		0.71			0	0	1
	Plan(s)	R9	Residential	Bedroom	W10	95°	$\rightarrow$		0.52		7	2			
	(-)				W11	40°N	7		1.79		3	0			
								1.0		2.31			8	2	Y
	Plan(s)	R10	Residential	Bedroom	W12	40°N	71		1.85		3	0			
								1.0		1.85			3	0	Y
	Plan(s)	R11	Residential	Bedroom	W13	40°N	7		0.96		1	0			
								1.0		0.96			1	0	1
		R12	Residential	LD	W14	95°	$\rightarrow$		0.50		7	0			
					W15	40°N	7		1.32		4	0			
								1.5		1.81			7	0	Y
	Plan(s)	R13	Residential	Bedroom	W16	40°N	7		1.37		3	0			
								1.0		1.37			3	0	Y
	Plan(s)	R14	Residential	Bedroom	W17	40°N	7		1.13		1	0			
								1.0		1.13			1	0	Y
	Plan(s)	R15	Residential	LKD	W18	95°	$\rightarrow$		0.36		6	0			
					W19	40°N	7		1.01		2	0			
								2.0		1.37			6	0	1
	Plan(s)	R16	Residential	Bedroom	W20	40°N	7		1.56		2	0			
					W21	345°N	$\uparrow$		0.52		0	0			
								1.0		2.08			2	0	Y
	Plan(s)	R17	Residential	Bedroom	W22	40°N	7		0.95		1	0			
								1.0		0.95			1	0	1
	Plan(s)	R18	Residential	LKD	W23	40°N	7		0.50		2	0			
					W24	310°N	K		1.46		9	0			
					W25	310°N	K		1.34		10	0			
								2.0		3.29			12	0	Y
	Plan(s)	R19	Residential	Bedroom	W26	310°N	K		2.24		8	0			
								1.0		2.24			8	0	Y
	Plan(s)	R20	Residential	Bedroom	W27	265°	<b>←</b>		2.24		29	7			
								1.0		2.24			29	7	Y
	Plan(s)	R21	Residential	LKD	W28	265°	<b>←</b>		0.74		24	4			

IA.	OF .		APSH	
Satisfie	Short-	Satisfie	Sho	rtfall
s	fall	s	Annua	
	(ADF%)	BRE?	(%)	r (%)
Yes	-	No	17	5
Yes	-	No	20	5
Yes	-	Yes	0	-1
Yes	-	Yes	-7	-8
Yes	-	Yes	-16	-11
Yes	-	Yes	-14	-7
No	0.60	Yes	-3	-9
			_	_
Yes	-	Win only	8	-5
		140		
Yes	-	Win only	3	-2
No	1.12	No	19	2
.,				
No	0.61	No	25	5
Yes	-	No	12	4
			_	_
No	0.83	No	7	3
Yes	-	No	3	3
No	0.29	No	25	5
				_
Yes	-	No	17	3
				_
Yes	-	No	22	5
			~ .	_
No	0.04	No	24	5
24		NI.	40	_
Yes	-	No	18	5
V		N.L.	00	-
Yes	-	No	22	5
V		N.I.	0.4	-
Yes	-	No	24	5
NI-	0.60	Nic	10	E
No	0.63	No	19	5
Von		NIc	22	E
Yes	-	No	23	5
No	0.05	No	24	E
No	0.05	No	24	5
V		NI.	40	-
Yes	-	No	13	5
Von	-	NIc	17	E
Yes		No	17	5
Yes	-	Yes	-4	-2
165		165		-2
			Page	e 2 of 17

Proper	rty, room	& wind	ow attributes					Day	light (B	RE)	:	Sunligh	t (BRE	)	Al	DF .		APSH	
		Room			V	/indow			ADF		AP wind		APSH Annua	room	Satisfie	Short-	Satisfie	Sho	
Floor	Flat no.	ref.	Property type	Room use	Ref. &	Orientat	ion	Targe t	ADF win	ADF (%)	Annu al	vvinte r	Annua I	vvinte r	s BRE?	fall (ADF%)	s BRE?	Annua I	vvinte r
					W29	220°	Ľ	(%)	1.68	(70)	34	17	(%)	(%)				(%)	(%)
								2.0		2.42			39	17	Yes	-	Yes	-14	-12
	Plan(s)	R22	Residential	Bedroom	W30	220°	Ľ		2.02		46	20					.,		
	Plan(s)	R23	Residential	Redroom	W31	220°	Ľ	1.0	2.66	2.02	44	16	46	20	Yes	-	Yes	-21	-15
	i iaii(s)	1125	Residential	Dealoon	W31	220	Ľ	1.0	2.00	2.66	77	10	44	16	Yes	-	Yes	-19	-11
	Plan(s)	R24	Residential	LKD	W32	220°	Ľ		1.51		32	17							
								2.0		1.51			32	17	No*	0.49	Yes	-7	-12
Third	Plan(s)	R1	Residential	Bedroom	W1	220°	Ľ	4.0	1.42	4.40	19	12	40	40	V		M/in and	0	7
	Plan(s)	R2	Residential	Living Room	W2	220°	Ľ	1.0	1.94	1.42	24	9	19	12	Yes	-	Win only	6	-7
	(-)							1.5		1.94			24	9	Yes	-	Win only	1	-4
	Plan(s)	R3	Residential	KD	W3	175°	$\downarrow$		0.97		11	4							
								2.0		0.97			11	4	No	1.03	No	14	1
	Plan(s)	R4	Residential	Bedroom	W4	175°	<b>\</b>	1.0	0.44	0.44	0	0	0	0	No	0.56	No	25	5
	Plan(s)	R5	Residential	Bedroom	W5	130°	Ŋ	1.0	1.01	0.44	13	1		J	INU	0.30	TVU	23	
	(-/							1.0		1.01			13	1	Yes	-	No	12	4
	Plan(s)	R6	Residential	KD	W6	130°	7		1.19		18	2							
	Di ()	n-	5	5	14/-			2.0		1.19			18	2	No	0.81	No	7	3
	Plan(s)	R7	Residential	Living Room	W7 W8	130° 40°N	7		1.37		22 0	0							
					VVO	40 14	/-	1.5	1.03	2.40	U		22	2	Yes	-	No	3	3
	Plan(s)	R8	Residential	Bedroom	W9	40°N	7		0.72		0	0							
								1.0		0.72			0	0	No	0.28	No	25	5
	Plan(s)	R9	Residential	Bedroom	W10	95°	$\rightarrow$		0.53		7	2							
					W11	40°N	7	1.0	1.83	2.36	3	0	8	2	Yes	-	No	17	3
	Plan(s)	R10	Residential	Bedroom	W12	40°N	7	1.0	1.89	2.50	3	0			103		140	.,	
								1.0		1.89			3	0	Yes	-	No	22	5
	Plan(s)	R11	Residential	Bedroom	W13	40°N	7		0.98		1	0							
		D40	Danislandial	1.0	10/4.4	O.F.º	Ų	1.0	0.54	0.98	7		1	0	No	0.02	No	24	5
		R12	Residential	LD	W14 W15	95° 40°N	<b>→</b>		0.51 1.34		7 4	0							
								1.5		1.85			7	0	Yes	-	No	18	5
	Plan(s)	R13	Residential	Bedroom	W16	40°N	7		1.40		3	0							
								1.0		1.40			3	0	Yes	-	No	22	5
	Plan(s)	R14	Residential	Bedroom	W17	40°N	7	1.0	1.15	1.15	1	0	1	0	Yes	_	No	24	5
	Plan(s)	R15	Residential	LKD	W18	95°	<b>→</b>	1.0	0.36	1.13	6	0	'		163		INO	24	J
	(-)				W19	40°N	7		1.03		2	0							
								2.0		1.40			6	0	No	0.60	No	19	5
	Plan(s)	R16	Residential	Bedroom	W20	40°N	7		1.59		2	0							
					W21	345°N	1	1.0	0.54	2.13	0	0	2	0	Yes	-	No	23	5
	Plan(s)	R17	Residential	Bedroom	W22	40°N	7		0.98		1	0			, 00				
	. ,							1.0		0.98			1	0	No	0.02	No	24	5
	Plan(s)	R18	Residential	LKD	W23	40°N	7		0.51		2	0							
					W24 W25	310°N	K		1.55 1.43		10 10	0							
					VV25	310°N	K	2.0	1.43	3.50	10		12	0	Yes	-	No	13	5
	Plan(s)	R19	Residential	Bedroom	W26	310°N	K		2.41		10	0							
								1.0		2.41			10	0	Yes	-	No	15	5
	Plan(s)	R20	Residential	Bedroom	W27	265°	<b>←</b>	4.0	2.42	0.15	31	8	6.1		\			_	
	Plan(s)	R21	Residential	LKD	W28	265°	<b>+</b>	1.0	0.79	2.42	26	5	31	8	Yes	-	Yes	-6	-3
	, idii(3)	1,41	rtooidoniiai		W29	220°	∠ ∠		1.80		35	18							
								2.0		2.59			41	18	Yes	-	Yes	-16	-13
	Plan(s)	R22	Residential	Bedroom	W30	220°	Ľ		2.12		46	20							
	Plan(s)	R23	Residential	Redroom	W31	2200	Ľ	1.0	2.78	2.12	44	16	46	20	Yes	-	Yes	-21	-15
	riali(S)	R23	nesidential	DEUIOUIII	VVST	220°	Ľ	1.0	2.18	2.78	44	16	44	16	Yes	-	Yes	-19	-11
															. 30				

Proper	ty, room	& windo	ow attributes					Day	/light (B	RE)	;	Sunligh	nt (BRE		Al	<b>DF</b>		APSH	
		Room			V	/indow			ADF		AP Win	SFI dow VVInte	APSH		Satisfie	Short-	Satisfie		rtfall
Floor	Flat no.	ref.	Property type	Room use	Ref. &	Orientat	tion	Targe t	ADF win	ADF	Annu al	winte r	Annua I	Winte r	s BRE?	fall (ADF%)	s BRE?	Annua I	vvinte r
	Plan(s)	R24	Residential	LKD	W32	220°	L/	(%)	1.62	(%)	35	20	(%)	(%)		, ,,		(%)	(%)
	(-)							2.0		1.62			35	20	No*	0.38	Yes	-10	-15
Fourth	Plan(s)	R1	Residential	Bedroom	W1	220°	Ľ		1.48		20	13							
								1.0		1.48			20	13	Yes	-	Win only	5	-8
	Plan(s)	R2	Residential	Living Room	W2	220°	Ľ	1.5	2.04	2.04	25	10	25	10	Yes	_	Yes	0	-5
	Plan(s)	R3	Residential	KD	W3	175°	<b>V</b>	1.5	1.09	2.04	14	5	25	10	162	-	162	U	-5
	α(6)		ricoldonia				Ť	2.0		1.09			14	5	No	0.91	Win only	11	0
	Plan(s)	R4	Residential	Bedroom	W4	175°	<b>4</b>		0.50		2	0							
								1.0		0.50			2	0	No	0.50	No	23	5
	Plan(s)	R5	Residential	Bedroom	W5	130°	7	4.0	1.03	4.00	13	1	40	4	V		Na	40	
	Plan(s)	R6	Residential	KD	W6	130°	7	1.0	1.21	1.03	19	2	13	1	Yes	-	No	12	4
	α(0)		rtoordormar			100	Ē	2.0		1.21			19	2	No	0.79	No	6	3
	Plan(s)	R7	Residential	Living Room	W7	130°	7		1.40		22	2							
					W8	40°N	7		1.04		0	0							
	DI ()		5	5.	14/0	40041	_	1.5	. =.	2.44	0		22	2	Yes	-	No	3	3
	Plan(s)	R8	Residential	Bedroom	W9	40°N	7	1.0	0.73	0.73	0	0	0	0	No	0.27	No	25	5
	Plan(s)	R9	Residential	Bedroom	W10	95°	$\rightarrow$	1.0	0.54	0.75	7	2			140	0.21	140	20	
	( )				W11	40°N	7		1.86		3	0							
								1.0		2.41			8	2	Yes	-	No	17	3
	Plan(s)	R10	Residential	Bedroom	W12	40°N	7		1.92		3	0							
	Diam(a)	D44	Danislandial	Bedroom	WAO	40°N	7	1.0	0.99	1.92	1	0	3	0	Yes	-	No	22	5
	Plan(s)	R11	Residential	Dealoom	W13	40 N	/1	1.0	0.99	0.99	1	0	1	0	No	0.01	No	24	5
		R12	Residential	LD	W14	95°	<b>→</b>		0.52	0.00	7	0			110	0.01	110		
					W15	40°N	7		1.37		4	0							
								1.5		1.89			7	0	Yes	-	No	18	5
	Plan(s)	R13	Residential	Bedroom	W16	40°N	7		1.43		3	0							-
	Plan(s)	R14	Residential	Bedroom	W17	40°N	71	1.0	1.16	1.43	1	0	3	0	Yes	-	No	22	5
	1 1011(3)	1117	residential	Bearoom	** 17	40 14	,.	1.0	1.10	1.16	ı		1	0	Yes	-	No	24	5
	Plan(s)	R15	Residential	LKD	W18	95°	$\rightarrow$		0.37		6	0							
					W19	40°N	7		1.05		2	0							
								2.0		1.42			6	0	No	0.58	No	19	5
	Plan(s)	R16	Residential	Bedroom	W20 W21	40°N	7		1.63 0.55		2	0							
					VVZI	345°N	$\uparrow$	1.0	0.55	2.18	U	0	2	0	Yes		No	23	5
	Plan(s)	R17	Residential	Bedroom	W22	40°N	7		0.99		1	0							
								1.0		0.99			1	0	No	0.01	No	24	5
	Plan(s)	R18	Residential	LKD	W23	40°N	7		0.52		2	0							
					W24	310°N	K K		1.60		10	0							
					W25	310°N	K	2.0	1.48	3.60	10	0	12	0	Yes	-	No	13	5
	Plan(s)	R19	Residential	Bedroom	W26	310°N	K	,	2.49	,.50	10	0			. 50				
								1.0		2.49			10	0	Yes	-	No	15	5
	Plan(s)	R20	Residential	Bedroom	W27	265°	<b>←</b>		2.46		31	8							
	Diam(a)	D04	Desidential	LKD	WOO	2650	,	1.0	0.00	2.46	00	-	31	8	Yes	-	Yes	-6	-3
	Plan(s)	R21	Residential	LVD	W28 W29	265° 220°	<b>←</b> ∠		0.80 1.85		26 37	5 20							
					25	220		2.0	7.50	2.65	3,	2.5	43	20	Yes	-	Yes	-18	-15
	Plan(s)	R22	Residential	Bedroom	W30	220°	Ľ		2.17		46	20							
								1.0		2.17			46	20	Yes	-	Yes	-21	-15
	Plan(s)	R23	Residential	Bedroom	W31	220°	Ľ	4.0	2.85	0.07	44	16	4.4	40	V.			10	4.
	Plan(s)	R24	Residential	LKD	W32	220°	Ľ	1.0	1.69	2.85	36	21	44	16	Yes	-	Yes	-19	-11
	i iaii(S)	1124	residential	LIND	VV 3Z	220		2.0	1.09	1.69	30	21	36	21	No*	0.31	Yes	-11	-16
Fifth	Plan(s)	R1	Residential	Bedroom	W1	220°	Ľ		1.55		20	13				.,			
								1.0		1.55			20	13	Yes	-	Win only	5	-8
	Plan(s)	R2	Residential	Living Room	W2	220°	Ľ		2.21		30	15							
								1.5		2.21			30	15	Yes	-	Yes	-5	-10

Prope	rty, room	& wind	low attributes					Day	light (B	RE)	:	Sunligh	t (BRE		Al	DF		APSH	
	7,	_			٧	/indow			ADF		AP	ЗΠ	APSH		Satisfie	Short-	Satisfie	Sho	rtfall
Floor	Flat no.	Room ref.	Property type	Room use		Orientat	ion	Targe	ADF win	ADF	Annu al	dow Winte r	Annua		s	fall	s		vvinte r
								(%)	(%)	(%)	(%)	(%)	(%)	(%)	BRE?	(ADF%)	BRE?	(%)	(%)
	Plan(s)	R3	Residential	KD	W3	175°	4	2.0	1.25	1.25	19	8	19		No	0.75	Win only	6	-3
	Plan(s)	R4	Residential	Bedroom	W4	175°	<b>+</b>	2.0	0.58	1.25	4	1	19	8	No	0.75	vviii oriiy	0	-3
	i iaii(s)	114	Residential	Dedicom	VV-4	1/3		1.0	0.50	0.58	7	,	4	1	No	0.42	No	21	4
	Plan(s)	R5	Residential	Bedroom	W5	130°	V		1.06	0.00	13	1				02			·
	(-)							1.0		1.06			13	1	Yes	-	No	12	4
	Plan(s)	R6	Residential	KD	W6	130°	7		1.24		19	2							
								2.0		1.24			19	2	No	0.76	No	6	3
	Plan(s)	R7	Residential	Living Room	W7	130°	7		1.45		22	2							
					W8	40°N	7		1.04		0	0							
	51 ()	ъ.	5	5.	1410		_	1.5		2.49	•		22	2	Yes	-	No	3	3
	Plan(s)	R8	Residential	Bedroom	W9	40°N	7	4.0	0.73	0.73	0	0	0	0	No	0.27	NIa	25	_
	Plan(s)	R9	Residential	Bedroom	W10	95°	$\rightarrow$	1.0	0.56	0.73	7	2	U	0	INO	0.27	No	25	5
	1 1011(3)	11.5	residential	Dearoom	W11	40°N	7		1.90		3	0							
								1.0		2.45			8	2	Yes	-	No	17	3
	Plan(s)	R10	Residential	Bedroom	W12	40°N	7		1.96		3	0							
								1.0		1.96			3	0	Yes	-	No	22	5
	Plan(s)	R11	Residential	Bedroom	W13	40°N	7		0.99		1	0							
								1.0		0.99			1	0	No	0.01	No	24	5
		R12	Residential	LD	W14	95°	$\rightarrow$		0.53		7	0							
					W15	40°N	7		1.40		4	0	_	_					_
	Diag(a)	D40	Desidential	Dadassa	10/40	40001	7	1.5	4 45	1.92	2	0	7	0	Yes	-	No	18	5
	Plan(s)	R13	Residential	Bedroom	W16	40°N	7	1.0	1.45	1.45	3	0	3	0	Yes	_	No	22	5
	Plan(s)	R14	Residential	Bedroom	W17	40°N	7	1.0	1.03	1.45	1	0	3		163		140	22	3
	(0)		rtooraoriilar	200.00		10 11		1.0		1.03	,		1	0	Yes	-	No	24	5
	Plan(s)	R15	Residential	LKD	W18	95°	$\rightarrow$		0.34		5	0							
					W19	40°N	7		1.07		3	0							
								2.0		1.41			6	0	No	0.59	No	19	5
	Plan(s)	R16	Residential	Bedroom	W20	40°N	7		1.65		2	0							
					W21	345°N	$\uparrow$		0.51		0	0							
	DI (-)	D47	Deside of al	Darlaren	14400	40041	_	1.0	0.00	2.16	,	0	2	0	Yes	-	No	23	5
	Plan(s)	R17	Residential	Bedroom	W22	40°N	71	1.0	0.88	0.88	1	0	1	0	No	0.12	No	24	5
	Plan(s)	R18	Residential	LKD	W23	40°N	7	1.0	0.47	0.00	2	0	'	0	140	0.12	INO	24	3
	(0)	0	rtooraoriilar	2.13	W24	310°N	K		1.61		10	0							
					W25	310°N	K		1.49		10	0							
								2.0		3.57			12	0	Yes	-	No	13	5
	Plan(s)	R19	Residential	Bedroom	W26	310°N	↸		2.50		10	0							
								1.0		2.50			10	0	Yes	-	No	15	5
	Plan(s)	R20	Residential	Bedroom	W27	265°	<b>←</b>		2.47		31	8							_
	Diam/-)	DO4	Donidation	LKD	14/00	2050	,	1.0	0.01	2.47	00	,	31	8	Yes	-	Yes	-6	-3
	Plan(s)	R21	Residential	LKD	W28 W29	265° 220°	<b>←</b> ∠		0.81 2.77		26 61	5 24							
					VV Z 3	220	E	2.0	2.77	3.58	O I	24	62	24	Yes	-	Yes	-37	-19
	Plan(s)	R22	Residential	Bedroom	W30	220°	ĸ		2.40	50	50	20			. 30				
	. ,							1.0		2.40			50	20	Yes	-	Yes	-25	-15
	Plan(s)	R23	Residential	Bedroom	W31	220°	Ľ		3.19		50	20							
								1.0		3.19			50	20	Yes	-	Yes	-25	-15
	Plan(s)	R24	Residential	LKD	W32	220°	Ľ		2.60		61	24							
6:	DI ()		D. 11	D. I	101	2255		2.0	,	2.60	2.5		61	24	Yes	-	Yes	-36	-19
Sixth	Plan(s)	R1	Residential	Bedroom	W1	220°	Ľ	1.0	1.63	1.60	23	16	22	16	Ver		M/in cal	2	14
	Plan(s)	R2	Residential	Living Room	W2	220°	ĸ	1.0	2.40	1.63	34	19	23	16	Yes	-	Win only	2	-11
	1 1011(5)	IXZ	residential	LIVING INDUIT	v v ∠	220	_	1.5	2.40	2.40	J-4	19	34	19	Yes	-	Yes	-9	-14
	Plan(s)	R3	Residential	KD	W3	175°	<b>1</b>		1.44		22	11			. 30		. 55	J	
	(-/							2.0		1.44			22	11	No	0.56	Win only	3	-6
	Plan(s)	R4	Residential	Bedroom	W4	175°	<b>1</b>		0.67		6	3							
								1.0		0.67			6	3	No	0.33	No	19	2
	Plan(s)	R5	Residential	Bedroom	W5	130°	7		1.10		13	1							
								1.0		1.10			13	1	Yes	-	No	12	4

Proper	rty, room	& wind	ow attributes					Day	light (B	RE)	:	Sunligh	nt (BRE	)	Al	OF .		APSH	
		Daam			٧	Vindow			ADF		AP win	SП dow	APSH	room	Satisfie	Short-	Satisfie	Sho	rtfall
Floor	Flat no.	Room ref.	Property type	Room use	Ref. &	Orienta	tion	Targe t	ADF win	ADF (%)	Annu al	VVinte r	Annua I	vvinte r	s BRE?	fall (ADF%)	s BRE?	Annua I	r
	Plan(s)	R6	Residential	KD	W6	130°	71	/0/ <sub>2</sub> \	1.29	(70)	19	2	(%)	(%)				(%)	(%)
								2.0		1.29			19	2	No	0.71	No	6	3
	Plan(s)	R7	Residential	Living Room	W7	130°	7		1.51		25	3							
					W8	40°N	71	1.5	1.04	2.56	0	0	25	3	Yes	_	Ann only	0	2
	Plan(s)	R8	Residential	Bedroom	W9	40°N	7	1.5	0.73	2.50	0	0	25	3	162	-	Annonly	U	2
	α(ο)		rtooraoriilar	200.00		10 11		1.0	00	0.73	Ü		0	0	No	0.27	No	25	5
	Plan(s)	R9	Residential	Bedroom	W10	95°	$\rightarrow$		0.57		7	2							
					W11	40°N	7		1.93		3	0	İ						
								1.0		2.50			8	2	Yes	-	No	17	3
	Plan(s)	R10	Residential	Bedroom	W12	40°N	7		2.00		3	0	_	_					_
	Diam(a)	D44	Danidantial	Dadassa	14/40	4001	_	1.0	0.00	2.00	4	0	3	0	Yes	-	No	22	5
	Plan(s)	R11	Residential	Bedroom	W13	40°N	7	1.0	0.99	0.99	1	0	1	0	No	0.01	No	24	5
		R12	Residential	LD	W14	95°	<b>→</b>	1.0	0.54	0.55	7	0	'	0	140	0.01	INO	24	3
					W15	40°N	7		1.42		4	0							
								1.5		1.96			7	0	Yes	-	No	18	5
Sevent	Plan(s)	R1	Residential	Bedroom	W1	220°	Ľ		1.69		23	16	Ì						
								1.0		1.69			23	16	Yes	-	Win only	2	-11
	Plan(s)	R2	Residential	Living Room	W2	220°	Ľ		2.54		36	21							
								1.5		2.54			36	21	Yes	-	Yes	-11	-16
	Plan(s)	R3	Residential	KD	W3	175°	<b>V</b>	2.0	1.62	1.60	24	13	24	12	No*	0.20	Min only	4	
	Plan(s)	R4	Residential	Redroom	W4	175°	<b>4</b>	2.0	0.76	1.62	7	4	24	13	No*	0.38	Win only	1	-8
	i iaii(s)	114	Residential	Deditoon	V V -4	1/3	•	1.0	0.70	0.76	/	7	7	4	No	0.24	No	18	1
	Plan(s)	R5	Residential	Bedroom	W5	130°	7		1.18		14	1							
								1.0		1.18			14	1	Yes	-	No	11	4
	Plan(s)	R6	Residential	KD	W6	130°	7		1.36		23	2							
								2.0		1.36			23	2	No	0.64	No	2	3
	Plan(s)	R7	Residential	Living Room	W7	130°	7		1.60		28	3							
					W8	40°N	7		1.05		0	0		_				_	_
	Diam(a)	DO	Desidential	Dadaaaa	14/0	4000	-	1.5	0.70	2.65	0	0	28	3	Yes	-	Ann only	-3	2
	Plan(s)	R8	Residential	Bearoom	W9	40°N	7	1.0	0.73	0.73	0	0	0	0	No	0.27	No	25	5
	Plan(s)	R9	Residential	Bedroom	W10	95°	<b>→</b>	1.0	0.58	0.73	7	2	0	0	140	0.21	INO	23	3
	(-)				W11	40°N	7		1.97		3	0							
								1.0		2.55			8	2	Yes	-	No	17	3
	Plan(s)	R10	Residential	Bedroom	W12	40°N	7		2.03		3	0							
								1.0		2.03			3	0	Yes	-	No	22	5
	Plan(s)	R11	Residential	Bedroom	W13	40°N	7		0.99		1	0							
								1.0		0.99			1	0	No	0.01	No	24	5
		R12	Residential	LD	W14	95°	<b>→</b>		0.55		7	0							
					W15	40°N	7	1.5	1.45	2.00	4	0	7	0	Yes	-	No	18	5
Eighth	Plan(s)	R1	Residential	Bedroom	W1	220°	Ľ	1.3	2.44	2.00	47	20	1		162		INO	10	3
.3/11	(0)					,		1.0		2.44			47	20	Yes	-	Yes	-22	-15
	Plan(s)	R2	Residential	Living Room	W2	220°	Ľ		3.76		57	21							
								1.5		3.76			57	21	Yes	-	Yes	-32	-16
	Plan(s)	R3	Residential	KD	W3	175°	<b>V</b>		1.74		27	13							
								2.0		1.74			27	13	No*	0.26	Yes	-2	-8
	Plan(s)	R4	Residential	Bedroom	W4	175°	<b>\</b>	4.0	0.87	0.07	10	4	4.0	4	N	0.40	A.L.	4.5	
	Dlon(s)	DE.	Posidontial	Podroom	\\/E	1200	N.	1.0	1 22	0.87	20	4	10	4	No	0.13	No	15	1
	Plan(s)	R5	Residential	Deuroom	W5	130°	7	1.0	1.32	1.32	20	1	20	1	Yes	-	No	5	4
	Plan(s)	R6	Residential	KD	W6	130°	Ŋ	1.0	1.50	1.02	28	2	20		163		140	J	-
	(0)			-				2.0		1.50	_5		28	2	No*	0.50	Ann only	-3	3
	Plan(s)	R7	Residential	Living Room	W7	130°	Ŋ		1.73		33	3							
					W8	40°N	7		0.94		0	0							
								1.5		2.67			33	3	Yes	-	Ann only	-8	2
	Plan(s)	R8	Residential	Bedroom	W9	40°N	7		0.65		0	0							
	<b>5</b> 1				1411			1.0		0.65			0	0	No	0.35	No	25	5
	Plan(s)	R9	Residential	Bedroom	W10	95°	$\rightarrow$		0.52		3	1							

Proper	rty, room	& wind	ow attributes					Day	light (B	RE)	:	Sunligh	ht (BRE	)	ΙA	)F		APSH	
		Room			V	Vindow			ADF		AP win	ъп dow Winte	APSH	l room	Satisfie	Short-	Satisfie		rtfall
Floor	Flat no.	ref.	Property type	Room use	Ref. 8	Orientat	ion	Targe t	ADF win	ADF	Annu al	vvinte r	Annua I	vvinte r	s BRE?	fall (ADF%)	s BRE?	Annua I	vvinte r
					W11	40°N	71	(%)	2.01	(%)	3	(%)	(%)	(%)				(%)	(%)
								1.0		2.53			6	1	Yes	-	No	19	4
	Plan(s)	R10	Residential	Bedroom	W12	40°N	7		2.08		3	0							
	DI ()	5	5		14440			1.0		2.08			3	0	Yes	-	No	22	5
	Plan(s)	R11	Residential	Bedroom	W13	40°N	7	1.0	0.88	0.88	1	0	1	0	No	0.12	No	24	5
		R12	Residential	LD	W14	95°	<b>→</b>	1.0	0.50	0.00	6	0			140	0.12	140	24	3
					W15	40°N	7		1.48		4	0							
								1.5		1.98			7	0	Yes	-	No	18	5
Disal	D D																		
	B Propos Plan(s)	R1	Residential	Bedroom	W1	246°	Ľ		1.27		6	0							
	(-)							1.0		1.27			6	0	Yes	-	No	19	5
	Plan(s)	R2	Residential	LKD	W2	246°	Ľ		0.64		7	4							
					W3	156°	7		0.31		5	4							
					W4	211°	K.		0.38		14	5							
					W5	156°	7	2.0	0.94	2.26	26	4	34	8	Yes	_	Yes	-9	-3
	Plan(s)	R3	Residential	Bedroom	W6	156°	7		0.60	2.20	3	2			100		100	J	J
	, ,							1.0		0.60			3	2	No	0.40	No	22	3
		R4	Residential	LD	W7	211°	Ľ		0.51		15	6							
					W8	156°	7		1.21		23	3					.,		
First	Plan(s)	R1	Residential	Podroom	W1	336°N	K	1.5	1.27	1.71	3	0	27	6	Yes	-	Yes	-2	-1
FIISI	riali(5)	ΝI	Residential	beuloom	VVI	330 N	1	1.0	1.21	1.27	3	U	3	0	Yes	-	No	22	5
	Plan(s)	R2	Residential	Bedroom	W2	336°N	K		1.50		3	0							
								1.0		1.50			3	0	Yes	-	No	22	5
	Plan(s)	R3	Residential	LKD	W3	336°N	K		0.48		1	0							
					W4	291°N	<b>←</b>	2.0	1.34	1 01	15	2	15	2	No*	0.10	No	10	2
	Plan(s)	R4	Residential	Redroom	W5	291°N	<b>←</b>	2.0	1.11	1.81	12	0	15	2	No*	0.19	No	10	3
	i idii(o)		reoluonia	Dodroom	W6	246°	Ľ		0.69		6	0							
								1.0		1.80			12	0	Yes	-	No	13	5
	Plan(s)	R5	Residential	Bedroom	W7	246°	Ľ		1.39		10	3							
	DI (-)	Do	Deside at a	LIKE	14/0	2.452		1.0	0.05	1.39	-		10	3	Yes	-	No	15	2
	Plan(s)	R6	Residential	LKD	W8 W9	246° 156°	<u>И</u>		0.65 0.24		7	2							
					W10	211°	- L		0.24		9	8							
					W11	156°	7		0.90		33	8							
								2.0		2.02			37	9	Yes	-	Yes	-12	-4
	Plan(s)	R7	Residential	Bedroom	W12	156°	7		0.42		2	2							
		R8	Residential	LD	W13	211°	L/	1.0	0.45	0.42	13	10	2	2	No	0.58	No	23	3
		110	residential	LU	W14	156°	Z Z		1.15		30	7							
								1.5		1.61			33	10	Yes	-	Yes	-8	-5
	Plan(s)	R9	Residential	Bedroom	W15	156°	7		0.30		1	1							
		D.1-	D	1.0	1444			1.0	٥ :-	0.30			1	1	No	0.70	No	24	4
		R10	Residential	LD	W16 W17	211° 156°	لا لا		0.43 1.06		12 24	9							
					VV 17	130	N	1.5	1.00	1.50	24	В	27	9	Yes	-	Yes	-2	-4
	Plan(s)	R11	Residential	Bedroom	W18	156°	Ŋ		0.20	50	0	0			. 30				
								1.0		0.20			0	0	No	0.80	No	25	5
		R12	Residential	LD	W19	211°	Ľ		0.41		10	7							
					W20	156°	7	4.5	0.98	4.00	19	3	00	7	NI.	0.44	M/im col	0	_
	Plan(s)	R13	Residential	LKD	W21	156°	N/	1.5	0.70	1.39	18	3	23	7	No	0.11	Win only	2	-2
	1 1011(3)	1113	Rodiudillidi	LIND	W22	101°	<b>→</b>		0.10		5	0							
					W23	156°	Ŋ		0.24		3	0							
					W24	66°N	7		1.08		14	0							
	Dis. ( )	D4.	Davids at 1	Dealer	14/0=			2.0	0.40	2.21	10		31	3	Yes	-	Ann only	-6	2
	Plan(s)	R14	Residential	Bedroom	W25	66°N	7	1.0	2.19	2.19	18	2	18	2	Yes	-	No	7	3
						LVD/I				2.19			18	2	res	-	INO	7	3

Proper	ty, room	& wind	ow attributes					Day	rlight (B	RE)	:	Sunligh	t (BRE	)	Al	DF		APSH	
	,				٧	Vindow		,	ADF	,	AP	ЗΠ	APSH	l room	Satisfie	Short-	Satisfie	Sho	rtfall
Floor	Flat no.	Room ref.	Property type	Room use	Ref. &	Orientat	ion	Targe t	ADF win	ADF	Annu al	dow Winte r	Annua	vvinte r	s BRE?	fall (ADF%)	s BRE?	Annua I	winte r
	DI (-)	D45	Desidential	D. days				(%)	(%)	(%)	(%)	(%)	(%)	(%)	DKE!	(ADF%)	DKE	(%)	(%)
	Plan(s)	R15	Residential	Bedroom	W26 W27	66°N 21°N	<b>⊿</b>		1.04 0.90		11	0							
					VVZ1	Z1 IV		1.0	0.50	1.94	U		11	0	Yes	_	No	14	5
	Plan(s)	R16	Residential	LKD	W28	21°N	$\uparrow$		1.09		4	0							
					W29	336°N	K		0.31		0	0							
								2.0		1.40			4	0	No	0.60	No	21	5
	Plan(s)	R17	Residential	Bedroom	W30	336°N	K		1.08		1	0							
								1.0		1.08			1	0	Yes	-	No	24	5
	Plan(s)	R18	Residential	Bedroom	W31	336°N	K		0.94	0.04	2	0		0					_
Casani	Plan(s)	D4	Desidential	Dodroom	W1	336°N	K	1.0	1.33	0.94	3	0	2	0	No	0.06	No	23	5
Second	riali(s)	R1	Residential	Bedroom	VVI	330 N	- ' \	1.0	1.33	1.33	3	U	3	0	Yes	-	No	22	5
	Plan(s)	R2	Residential	Bedroom	W2	336°N	K	1.0	1.58	1.00	3	0			100		140		
	. ,							1.0		1.58			3	0	Yes	-	No	22	5
	Plan(s)	R3	Residential	LKD	W3	336°N	K		0.50		1	0							
					W4	291°N	$\leftarrow$		1.43		16	2							
								2.0		1.94			16	2	No*	0.06	No	9	3
	Plan(s)	R4	Residential	Bedroom	W5	291°N	$\leftarrow$		1.17		12	0							
					W6	246°	Ľ		0.77		11	0							
								1.0		1.94			15	0	Yes	-	No	10	5
	Plan(s)	R5	Residential	Bedroom	W7	246°	Ľ		1.57		12	3	4.0					40	
	Dlon(a)	De	Desidential	LKD	14/0	2469	.,	1.0	0.72	1.57	0	_	12	3	Yes	-	No	13	2
	Plan(s)	R6	Residential	LND	W8 W9	246° 156°	R N		0.73		8	5 3							l I
					W10	211°	L L		0.33		11	10							
					W11	156°	7		1.00		37	10							l I
							_	2.0		2.34	-		44	14	Yes	-	Yes	-19	-9
	Plan(s)	R7	Residential	Bedroom	W12	156°	7		0.71		4	4							
								1.0		0.71			4	4	No	0.29	No	21	1
		R8	Residential	LD	W13	211°	Ľ		0.51		14	11							
					W14	156°	7		1.28		34	11							
								1.5		1.78			37	14	Yes	-	Yes	-12	-9
	Plan(s)	R9	Residential	Bedroom	W15	156°	7		0.60		3	3							
								1.0		0.60			3	3	No	0.40	No	22	2
		R10	Residential	LD	W16	211°	L.		0.49		14	11							
					W17	156°	7	4.5	1.18	4.07	29	10	20	40	Van		V	-7	0
	Plan(s)	R11	Residential	Redroom	W18	156°	7	1.5	0.49	1.67	2	2	32	13	Yes	-	Yes	-7	-8
	i iaii(s)	IXII	Residential	Deuroom	WIO	130	-24	1.0	0.43	0.49			2	2	No	0.51	No	23	3
		R12	Residential	LD	W19	211°	ĸ	1.0	0.47	0.10	14	11		_	140	0.01	140		
					W20	156°	7		1.08		24	8							
								1.5		1.56			28	12	Yes	-	Yes	-3	-7
	Plan(s)	R13	Residential	LKD	W21	156°	И		0.77		23	7							
					W22	101°	$\rightarrow$		0.19		5	0							
					W23	156°	7		0.28		5	2							
					W24	66°N	7		1.10		14	0							
								2.0		2.34			38	9	Yes	-	Yes	-13	-4
	Plan(s)	R14	Residential	Bedroom	W25	66°N	7		2.24		18	2						_	
	Dlon/s)	D45	Dooids-tist	Podros	MOO	CCON	-	1.0	1.00	2.24	4.4		18	2	Yes	-	No	7	3
	Plan(s)	R15	Residential	Beardom	W26	66°N	7		1.06 0.92		11	0							
					W27	21°N	1	1.0	0.92	1.98	U	U	11	0	Yes	_	No	14	5
	Plan(s)	R16	Residential	LKD	W28	21°N	1	1.0	1.10	1.30	4	0			163		140	1-7	J
	(0)	0			W29	336°N	K		0.32		0	0							
								2.0		1.42			4	0	No	0.58	No	21	5
	Plan(s)	R17	Residential	Bedroom	W30	336°N	K		1.10		1	0							
								1.0		1.10			1	0	Yes	-	No	24	5
	Plan(s)	R18	Residential	Bedroom	W31	336°N	K		0.97		2	0							
								1.0		0.97			2	0	No	0.03	No	23	5
Third	Plan(s)	R1	Residential	Bedroom	W1	336°N	K		1.38		3	0							
								1.0		1.38			3	0	Yes	-	No	22	5
	Plan(s)	R2	Residential	Bedroom	W2	336°N	K		1.66		3	0							

Proper	rty, room	& wind	ow attributes					Day	rlight (B	RE)	:	Sunligh	nt (BRE	)	AI	)F		APSH	
		Room			٧	/indow			ADF		AP Win	SFI dow VVInte	APSH	room	Satisfie	Short-	Satisfie	Sho	
Floor	Flat no.	ref.	Property type	Room use	Ref. &	Orientat	ion	Targe t	ADF win	ADF	Annu al	vvinte r	Annua I	Winte r	s BRE?	fall (ADF%)	s BRE?	Annua I	vvinte r
								1.0	(%)	1.66	(%)	(%)	(%)	0	Yes		No	(%) 22	(%) 5
	Plan(s)	R3	Residential	LKD	W3	336°N	K		0.53		1	0							
					W4	291°N	$\leftarrow$		1.53		18	2							
								2.0		2.07			18	2	Yes	-	No	7	3
	Plan(s)	R4	Residential	Bedroom	W5 W6	291°N 246°	<b>←</b>		1.23 0.89		12 19	0							
					VVO	240	<u> </u>	1.0	0.03	2.11	19		21	0	Yes	-	No	4	5
	Plan(s)	R5	Residential	Bedroom	W7	246°	Ľ		1.81		20	3							
								1.0		1.81			20	3	Yes	-	No	5	2
	Plan(s)	R6	Residential	LKD	W8	246°	Ľ		0.85		15	5							
					W9 W10	156° 211°	N N		0.43 0.32		6 12	6							
					W11	156°	7		1.09		43	16							
								2.0		2.70			54	18	Yes	-	Yes	-29	-13
	Plan(s)	R7	Residential	Bedroom	W12	156°	7		0.92		8	8							
		Do	Danidantial	1.0	10/40	2449		1.0	0.50	0.92	40	45	8	8	No	0.08	Win only	17	-3
		R8	Residential	LD	W13 W14	211° 156°	R N		0.56 1.41		18 40	15 16							
					****	150	Ī	1.5		1.97	10	,,,	43	19	Yes	-	Yes	-18	-14
	Plan(s)	R9	Residential	Bedroom	W15	156°	7		0.82		6	6							
								1.0		0.82			6	6	No	0.18	Win only	19	-1
		R10	Residential	LD	W16	211°	Ľ		0.55		17	14							
					W17	156°	7	1.5	1.30	1.85	32	12	36	16	Yes	_	Yes	-11	-11
	Plan(s)	R11	Residential	Bedroom	W18	156°	7	1.5	0.70	1.05	5	5	30	16	162	-	res	-11	-11
	(-)							1.0		0.70			5	5	No	0.30	Win only	20	0
		R12	Residential	LD	W19	211°	ĸ		0.53		17	14							
					W20	156°	7		1.19		27	10							
	Diag(a)	D40	Danidantial	LICD	10/04	45.00		1.5	0.05	1.72	25		32	15	Yes	-	Yes	-7	-10
	Plan(s)	R13	Residential	LKD	W21 W22	156° 101°	<b>→</b>		0.85 0.19		25 5	9							
					W23	156°	, K		0.35		6	3							
					W24	66°N	7		1.12		14	0							
								2.0		2.51			39	10	Yes	-	Yes	-14	-5
	Plan(s)	R14	Residential	Bedroom	W25	66°N	7	4.0	2.28	0.00	18	2	40	0			NI.	-	
	Plan(s)	R15	Residential	Bedroom	W26	66°N	7	1.0	1.08	2.28	11	0	18	2	Yes	-	No	7	3
	(0)		rtooraormar	200.00	W27	21°N	1		0.94		0	0							
								1.0		2.02		İ	11	0	Yes	-	No	14	5
	Plan(s)	R16	Residential	LKD	W28	21°N	$\uparrow$		1.12		4	0							
					W29	336°N	K	0.0	0.33	4 45	0	0	4		Nie	0.55	Na	04	-
	Plan(s)	R17	Residential	Bedroom	W30	336°N	K	2.0	1.14	1.45	1	0	4	0	No	0.55	No	21	5
	(0)	,			50	-50 14	,	1.0		1.14		Ü	1	0	Yes	-	No	24	5
	Plan(s)	R18	Residential	Bedroom	W31	336°N	⋉		1.01		2	0							
								1.0		1.01			2	0	Yes	-	No	23	5
Fourth	Plan(s)	R1	Residential	Bedroom	W1	336°N	K	1.0	1.45	1.45	3	0	3	0	Yes	-	No	22	5
	Plan(s)	R2	Residential	Bedroom	W2	336°N	K	1.0	1.75	1.45	3	0	3	U	res	-	INO	22	5
	(0)					-50 14	,	1.0	0	1.75		Ü	3	0	Yes	-	No	22	5
	Plan(s)	R3	Residential	LKD	W3	336°N	K		0.56		1	0							
					W4	291°N	$\leftarrow$		1.61		20	4							
	Dlon/s)	D4	Dooidestial	Dodrog	\A/F	20491	,	2.0	107	2.17	10	0	20	4	Yes	-	No	5	1
	Plan(s)	R4	Residential	Deu100III	W5 W6	291°N 246°	<b>←</b>		1.27 1.04		13 27	3							
								1.0	,	2.31			30	3	Yes	-	Ann only	-5	2
	Plan(s)	R5	Residential	Bedroom	W7	246°	Ľ		2.17		31	5							
								1.0		2.17			31	5	Yes	-	Yes	-6	0
	Plan(s)	R6	Residential	LKD	W8	246°	Z.		1.03		29	7							
					W9 W10	156° 211°	N R		0.51 0.36		8 13	8 12							
					W11	156°	7		1.19		49	20							

Prope	rty, room	& wind	ow attributes					Day	rlight (B	RE)	:	Sunligh	t (BRE	)	ΑI	)F		APSH	
		Room			V	/indow			ADF		AP Win	SFI dow VVInte	APSH	room	Satisfie	Short-	Satisfie	Sho	
Floor	Flat no.	ref.	Property type	Room use	Ref. &	Orientat	ion	Targe t	ADF win	ADF	Annu al	vvinte r	Annua I	Winte r	s BRE?	fall (ADF%)	s BRE?	Annua I	winte r
								2.0	(%)	3.09	(%)	(%)	69	20	Yes	-	Yes	(%) -44	-15
	Plan(s)	R7	Residential	Bedroom	W12	156°	Ŋ		1.09		11	11							
								1.0		1.09			11	11	Yes	-	Win only	14	-6
		R8	Residential	LD	W13	211°	Ľ		0.61		19	16							
					W14	156°	7	1.5	1.54	2.15	45	20	48	23	Yes	_	Yes	-23	-18
	Plan(s)	R9	Residential	Bedroom	W15	156°	N N	1.5	0.98	2.15	10	10	40	23	res	-	res	-23	-10
	(0)		rtoordormar	200.00				1.0	0.00	0.98	,,,	,,,	10	10	No	0.02	Win only	15	-5
		R10	Residential	LD	W16	211°	Ľ		0.60		19	16							
					W17	156°	7		1.43		38	18							
	Diam(a)	D44	Danislantial	Dadassa	W/40	45.00		1.5	0.00	2.03	0	0	41	21	Yes	-	Yes	-16	-16
	Plan(s)	R11	Residential	Bedroom	W18	156°	7	1.0	0.86	0.86	8	8	8	8	No	0 14	Win only	17	-3
		R12	Residential	LD	W19	211°	ĸ		0.59	0.00	19	16			110	0			
					W20	156°	И		1.30		31	14							
								1.5		1.89			34	17	Yes	-	Yes	-9	-12
	Plan(s)	R13	Residential	LKD	W21	156°	7		0.92		30	13							
					W22	101°	→ 		0.20		5	0							
					W23 W24	156° 66°N	7		0.41 1.14		9 14	6							
					VVZ-7	00 14	,	2.0	1.17	2.67	14		44	14	Yes	-	Yes	-19	-9
	Plan(s)	R14	Residential	Bedroom	W25	66°N	7		2.32		19	2							
								1.0		2.32			19	2	Yes	-	No	6	3
	Plan(s)	R15	Residential	Bedroom	W26	66°N	7		1.10		11	0							
					W27	21°N	1		0.96		0	0			.,				_
	Plan(s)	R16	Residential	LKD	W28	21°N	1	1.0	1.13	2.06	4	0	11	0	Yes	-	No	14	5
	Plan(s)	KIO	Residential	LND	W29	336°N	T		0.35		0	0							
								2.0		1.49			4	0	No	0.51	No	21	5
	Plan(s)	R17	Residential	Bedroom	W30	336°N	K		1.20		1	0							
								1.0		1.20			1	0	Yes	-	No	24	5
	Plan(s)	R18	Residential	Bedroom	W31	336°N	K		1.06		2	0							
C:fth	Dlan(a)	D4	Decidential	Dadroom	۱۸/4	22C°N	F	1.0	1 5 1	1.06	2	0	2	0	Yes	-	No	23	5
Fifth	Plan(s)	R1	Residential	Bedroom	W1	336°N	K	1.0	1.54	1.54	3	0	3	0	Yes		No	22	5
	Plan(s)	R2	Residential	Bedroom	W2	336°N	K		1.86		3	0					110		
	. ,							1.0		1.86			3	0	Yes	-	No	22	5
	Plan(s)	R3	Residential	LKD	W3	336°N	⋉		0.60		1	0							
					W4	291°N	$\leftarrow$		1.66		21	5							
	DI (-)	D.4	D. C. L. C.	Destarran	14/5	00401		2.0	4.04	2.26	4.4		21	5	Yes	-	Win only	4	0
	Plan(s)	R4	Residential	bedroom	W5 W6	291°N 246°	<b>←</b>		1.31 1.21		14 33	1							
					****	240		1.0	1.21	2.52	00		35	8	Yes	-	Yes	-10	-3
	Plan(s)	R5	Residential	Bedroom	W7	246°	Ľ		2.62		39	12							
								1.0		2.62			39	12	Yes	-	Yes	-14	-7
	Plan(s)	R6	Residential	LKD	W8	246°	Ľ		1.28		39	12							
					W9	156°	7		0.58		9	9							
					W10 W11	211° 156°	R A		0.41 1.28		13 50	12 20							
					VV / I	130	2	2.0	1.20	3.55	50	20	81	26	Yes	-	Yes	-56	-21
	Plan(s)	R7	Residential	Bedroom	W12	156°	И	,	1.22	,.30	12	12							
								1.0		1.22			12	12	Yes	-	Win only	13	-7
		R8	Residential	LD	W13	211°	Ľ		0.64		19	16							
					W14	156°	7		1.66		49	20							
	Dlan(a)	DΩ	Pooldontic	Dodroom	\\/1E	1500	×.	1.5	1 11	2.30	10	10	52	23	Yes	-	Yes	-27	-18
	Plan(s)	R9	Residential	Dedroom	W15	156°	7	1.0	1.11	1.11	10	10	10	10	Yes	_	Win only	15	-5
		R10	Residential	LD	W16	211°	Ľ	5	0.64		19	16	1.5		100		or my	.5	
					W17	156°	Ŋ		1.55		41	18							
								1.5		2.18			44	21	Yes	-	Yes	-19	-16
	Plan(s)	R11	Residential	Bedroom	W18	156°	7		0.99		8	8							
								1.0		0.99			8	8	No	0.01	Win only	17	-3

Prope	rty, room	& windo	ow attributes					Day	/light (B	RE)		Sunligh	t (BRE	)	ΑI	)F		APSH	
	,				V	/indow			ADF	,	AP	ъπ	ADSH	room	Satisfie		Satisfie		rtfall
Floor	Flat no.	Room ref.	Property type	Room use	Ref. &	Orienta	tion	Targe t	ADF win	ADF	Annu" al	dow Winte r	Annua I	Winte	s	fall (ADF%)	s BRE?	Annua I	winte r
		R12	Residential	LD	W19	211°	Ľ	(%)	0.63	(%)	(%) 19	16	(%)	(%)	BKE!	(ADI 70)	DKE!	(%)	(%)
		N1Z	Residential	LD	W20	156°	N N		1.42		35	15							
								1.5		2.05			38	18	Yes	-	Yes	-13	-13
	Plan(s)	R13	Residential	LKD	W21	156°	7		1.00		33	14							
					W22	101°	$\rightarrow$		0.20		5	0							
					W23	156°	7		0.45		9	6							
					W24	66°N	71	2.0	1.16	0.04	15	0	47	4.4	V		Vaa	20	
	Plan(s)	R14	Residential	Bedroom	W25	66°N	71	2.0	2.36	2.81	20	2	47	14	Yes	-	Yes	-22	-9
	1 1011(3)	1014	residential	Dedicom	WZS	00 14		1.0	2.50	2.36	20		20	2	Yes	-	No	5	3
	Plan(s)	R15	Residential	Bedroom	W26	66°N	7		1.11		11	0							
					W27	21°N	$\uparrow$		0.98		0	0							
								1.0		2.10			11	0	Yes	-	No	14	5
	Plan(s)	R16	Residential	LKD	W28	21°N	$\uparrow$		1.14		4	0	İ						
					W29	336°N	K	2.0	0.39	4.50	0	0			NI-*	0.40	Ma	04	_
	Plan(s)	R17	Residential	Bedroom	W30	336°N	K	2.0	1.30	1.52	1	0	4	0	No*	0.48	No	21	5
	i idii(o)	1117	rtoolaorillar	Dodroom	*****	330 14	- 1	1.0	1.00	1.30	,		1	0	Yes	-	No	24	5
	Plan(s)	R18	Residential	Bedroom	W31	336°N	K		1.14		2	0							
								1.0		1.14			2	0	Yes	-	No	23	5
Sixth	Plan(s)	R1	Residential	Bedroom	W1	336°N	⋉		1.67		3	0							
								1.0		1.67			3	0	Yes	-	No	22	5
	Plan(s)	R2	Residential	Bedroom	W2	336°N	K		2.00		3	0		_					_
	Dlon(s)	R3	Residential	LKD	W3	336°N	K	1.0	0.64	2.00	1	0	3	0	Yes	-	No	22	5
	Plan(s)	KS	Residential	LND	W4	291°N	←		2.51		25	5							
						231 14	`	2.0	2.07	3.14	20		25	5	Yes	-	Yes	0	0
	Plan(s)	R4	Residential	Bedroom	W5	291°N	<b>←</b>		1.35		14	1							
					W6	246°	Ľ		1.25		34	9							
								1.0		2.60			36	9	Yes	-	Yes	-11	-4
	Plan(s)	R5	Residential	Bedroom	W7	246°	Ľ		2.75		41	14							_
	Diag(a)	DC	Danislandial	LKD	14/0	2460	.,	1.0	4.00	2.75	44	44	41	14	Yes	-	Yes	-16	-9
	Plan(s)	R6	Residential	LKD	W8 W9	246° 156°	L N		1.36 0.53		41 6	14							
					W10	211°			0.38		11	11							
					W11	156°	И		1.33		54	21							
								2.0		3.60			86	28	Yes	-	Yes	-61	-23
	Plan(s)	R7	Residential	Bedroom	W12	156°	7		1.13		9	9							
								1.0		1.13			9	9	Yes	-	Win only	16	-4
		R8	Residential	LD	W13	211°	Ľ.		0.60		17	15							
					W14	156°	7	1.5	1.74	2.34	49	20	51	22	Yes	-	Yes	-26	-17
	Plan(s)	R9	Residential	Bedroom	W15	156°	ĸ	1.5	1.18	2.04	10	10			103		103	20	.,
	(-/							1.0		1.18			10	10	Yes	-	Win only	15	-5
		R10	Residential	LD	W16	211°	Ľ		0.66		19	16							
					W17	156°	7		1.63		45	18							
	DI	5			,			1.5		2.29			48	21	Yes	-	Yes	-23	-16
	Plan(s)	R11	Residential	Bedroom	W18	156°	7	4.0	1.06	4.00	8	8	0	0	V		\\/: I	47	
		R12	Residential	LD	W19	211°	Ľ	1.0	0.66	1.06	19	16	8	8	Yes	-	Win only	17	-3
		1112	Residential		W20	156°	N N		1.50		38	15							
							Ī	1.5		2.16			41	18	Yes	-	Yes	-16	-13
	Plan(s)	R13	Residential	LKD	W21	156°	7		1.06		37	14							
					W22	101°	$\rightarrow$		0.20		5	0							
					W23	156°	Ŋ		0.48		9	6							
					W24	66°N	71	0.0	1.18	0.00	17	0		4.4			V.	00	
	Plan(s)	R14	Residential	Bedroom	W25	66°N	71	2.0	2.41	2.93	20	2	51	14	Yes	-	Yes	-26	-9
	1 1011(5)	1414	residential	Dealoon	VV23	OU IN	/1	1.0	2.41	2.41	20	2	20	2	Yes	-	No	5	3
	Plan(s)	R15	Residential	Bedroom	W26	66°N	7		1.13		11	0			. 30				
	,				W27	21°N	$\uparrow$		1.00		0	0							
								1.0		2.14			11	0	Yes	-	No	14	5

Proper	ty, room	& windo	ow attributes					Day	rlight (B	RE)			t (BRE)		Al	OF .		APSH	
Floren	Flot	Room	Dronest	Doom	V	/indow		l arge	ADF		AP win Annu		APSH Annua			Short-	Satisfie		rtfall vvinte
Floor	Flat no.	ref.	Property type	Room use	Ref. &	Orientat	ion	Targe t	win	ADF (%)	al		1	r	s BRE?	fall (ADF%)	s BRE?		
	Plan(s)	R16	Residential	LKD	W28	21°N	1	(%)	1.15	(70)	4	0	(%)	(%)				(%)	(%)
					W29	336°N	K		0.44		0	0							
								2.0		1.59			4	0	No*	0.41	No	21	5
	Plan(s)	R17	Residential	Bedroom	W30	336°N	K		1.46		1	0							
								1.0		1.46			1	0	Yes	-	No	24	5
	Plan(s)	R18	Residential	Bedroom	W31	336°N	K		1.29	4.00	2	0							_
Payantl	Dlan(a)	D4	Residential	Dadraam	W1	2469	.,	1.0	1.39	1.29	34	9	2	0	Yes	-	No	23	5
sevenii	Plan(s)	R1	Residential	Bedroom	W2	246° 156°	R N		1.39		10	10							
					VVZ	150		1.0	7.20	2.62	10	10	44	19	Yes	-	Yes	-19	-14
		R2	Residential	LD	W3	211°	ĸ		0.68		20	17							
					W4	156°	7		1.68		48	18							
								1.5		2.36			52	22	Yes	-	Yes	-27	-17
	Plan(s)	R3	Residential	Bedroom	W5	156°	7		1.07		8	8							
								1.0		1.07			8	8	Yes	-	Win only	17	-3
		R4	Residential	LD	W6	211°	K.		0.66		19	16							
					W7	156°	7	1 =	1.56	2.22	42	15	45	10	Voo		Voo	. 20	-13
	Plan(s)	R5	Residential	LKD	W8	156°	7	1.5	1.11	2.22	41	14	45	18	Yes	-	Yes	-20	-13
	, idil(3)	110	residential	21.0	W9	101°	<b>→</b>		0.21		6	0							
					W10	156°	٧		0.48		9	6							
					W11	66°N	7		1.20		18	0							
								2.0		3.00			54	14	Yes	-	Yes	-29	-9
	Plan(s)	R6	Residential	Bedroom	W12	66°N	7		2.45		21	2							
								1.0		2.45			21	2	Yes	-	No	4	3
	Plan(s)	R7	Residential	Bedroom	W13	66°N	7		1.15		11	0							
					W14	21°N	1		1.03		0	0		_					_
	Diam(a)	DO	Danislandial	LIKD	10/45	24.001	^	1.0	4.47	2.17	,		11	0	Yes	-	No	14	5
	Plan(s)	R8	Residential	LKD	W15 W16	21°N 336°N	↑ 		1.17 0.52		<i>4</i> 0	0							
					VV 10	330 N	- ' \	2.0	0.02	1.68	U		4	0	No*	0.32	No	21	5
	Plan(s)	R9	Residential	Bedroom	W17	336°N	K	2.0	1.71		1	0				0.02			
								1.0		1.71			1	0	Yes	-	No	24	5
	Plan(s)	R10	Residential	Bedroom	W18	336°N	K		1.52		2	0							
								1.0		1.52			2	0	Yes	-	No	23	5
Eighth	Plan(s)	R1	Residential	Bedroom	W1	246°	Ľ		1.50		34	9							
					W2	156°	7		1.25		10	10		4.0				40	
		R2	Residential	I D	W3	211°	ĸ	1.0	0.68	2.75	20	17	44	19	Yes	-	Yes	-19	-14
		NZ	Residential	LU	W4	156°	N N		1.73		50	18							
							_	1.5	7.70	2.41	55	,,,	54	22	Yes	-	Yes	-29	-17
	Plan(s)	R3	Residential	Bedroom	W5	156°	7		1.09		8	8							
								1.0		1.09			8	8	Yes	-	Win only	17	-3
		R4	Residential	LD	W6	211°	Ľ		0.66		19	16							
					W7	156°	7		1.62		48	17							
	<b>5</b> 1 / ·	_		11/5	,			1.5		2.29			51	20	Yes	-	Yes	-26	-15
	Plan(s)	R5	Residential	LKD	W8	156°	7		1.16		45	14							
					W9 W10	101°	<b>→</b>		0.23 0.48		8 9	0							
					W10	156° 66°N	7		1.23		19	6							
						30 14	,	2.0	1.25	3.10	,,		57	14	Yes	-	Yes	-32	-9
	Plan(s)	R6	Residential	Bedroom	W12	66°N	7		2.50		22	2							
								1.0		2.50			22	2	Yes	-	No	3	3
	Plan(s)	R7	Residential	Bedroom	W13	66°N	7		1.16		11	0							
					W14	21°N	$\uparrow$		1.06		0	0							
								1.0		2.22			11	0	Yes	-	No	14	5
	Plan(s)	R8	Residential	LKD	W15	21°N	<b>1</b>		1.26		4	0							
					W16	336°N	K	2.0	0.62	1 00	0	0	4	0	NIo*	0.12	No	24	F
	Plan(s)	R9	Residential	Redroom	W17	336°N	K	2.0	2.06	1.88	1	0	4	0	No*	0.12	No	21	5
	1 1011(5)	IV9	residerillal	Dealoon	VV 17	330 IV	1	1.0	2.00	2.06	1	U	1	0	Yes	-	No	24	5
	Plan(s)	R10	Residential	Bedroom	W18	336°N	K		1.87		2	0			. 30				
	(-)	-			ا ما امامان		V /V		.1 50/ 45										

Prope	rty, room	& wind	ow attributes					Day	rlight (B	RE)	:	Sunligh	t (BRE	)	Α	DF		APSH	
		Doom			V	Vindow			ADF			on dow	APSH	l room	Satisfie	Short-	Satisfie	Sho	rtfall
Floor	Flat no.	Room ref.	Property type	Room use	Ref. 8	Orienta	tion	Targe	ADF win	ADF	Annu' al	VVInte r	Annua	vvinte r	s BRE?	fall (ADF%)	s BRE?	Annua I	vv inte r
								1.0	(%)	(%) 1.87	(%)	(%)	(%)	(%)	Yes	(ADI 70)	No No	23	(%)
Ninth	Plan(s)	R1	Residential	Bedroom	W1	246°	ĸ	1.0	1.50	1.07	34	9		0	162	-	INO	23	3
	α(ο)		rtooraoriilar	200.00	W2	156°	7		1.30		11	11							
								1.0		2.81			45	20	Yes	-	Yes	-20	-15
		R2	Residential	LD	W3	211°	ĸ		0.68		20	17							
					W4	156°	7		1.78		52	18							
								1.5		2.46			56	22	Yes	-	Yes	-31	-17
	Plan(s)	R3	Residential	Bedroom	W5	156°	7		1.17		8	8							
		D4	Desidential	LD	MC	2440		1.0	0.00	1.17	40	10	8	8	Yes	-	Win only	17	-3
		R4	Residential	LD	W6 W7	211° 156°	R N		0.66 1.70		19 51	16 17							
					***	130		1.5	1.70	2.36	31	,,	54	20	Yes	_	Yes	-29	-15
	Plan(s)	R5	Residential	LKD	W8	156°	7		1.22		52	17							
					W9	101°	$\rightarrow$		0.28		10	0							
					W10	156°	7		0.50		9	6							
					W11	66°N	7		1.26		20	0							
								2.0		3.26			61	17	Yes	-	Yes	-36	-12
	Plan(s)	R6	Residential	Bedroom	W12	66°N	7		2.56		22	2							
	DI ()		5		14/40	66011	_	1.0		2.56		0	22	2	Yes	-	No	3	3
	Plan(s)	R7	Residential	Bedroom	W13	66°N	7		1.18		11	0							
					W14	21°N	1	1.0	1.09	2.27	0	0	11	0	Yes	-	No	14	5
	Plan(s)	R8	Residential	IKD	W15	21°N	1	1.0	1.37	2.21	4	0	11	U	res	-	INO	14	5
	1 1011(3)	110	residential	LIND	W16	336°N	   		0.73		1	0							
					*****	550 11		2.0	0.70	2.10			5	0	Yes	-	No	20	5
	Plan(s)	R9	Residential	Bedroom	W17	336°N	K		2.47		3	0							
								1.0		2.47			3	0	Yes	-	No	22	5
	Plan(s)	R10	Residential	Bedroom	W18	336°N	K		2.28		3	0							
								1.0		2.28			3	0	Yes	-	No	22	5
Tenth	Plan(s)	R1	Residential	Bedroom	W1	246°	Ľ		1.50		34	9							
					W2	156°	7		1.17		10	9							
								1.0		2.67			44	18	Yes	-	Yes	-19	-13
		R2	Residential	LD	W3	211°	<b>L</b>		0.62		18	16							
					W4	156°	7	1.5	1.84	2.46	56	20	59	23	Yes	_	Yes	-34	-18
	Plan(s)	R3	Residential	Redroom	W5	156°	لا	1.5	1.07	2.40	9	8	59	23	162	-	162	-34	-10
	1 1011(0)	110	rtoolaorillar	Boaroom	****	130	_	1.0	1.01	1.07	U		9	8	Yes	_	Win only	16	-3
		R4	Residential	LD	W6	211°	ĸ		0.61		18	15							
					W7	156°	7		1.78		53	18							
								1.5		2.39			55	20	Yes	-	Yes	-30	-15
	Plan(s)	R5	Residential	LKD	W8	156°	7		1.29		52	17							
					W9	101°	$\rightarrow$		0.27		9	2							
					W10	156°	7		0.45		7	4							
					W11	66°N	7		1.30		21	1		4.0	.,				
	Dlon/s)	DC.	Dooids-ti-1	Podros	10/40	GC ON	7	2.0	2.62	3.31	22	2	63	19	Yes	-	Yes	-38	-14
	Plan(s)	R6	Residential	bedroom	W12	66°N	7	1.0	2.62	2.62	22	2	22	2	Yes	-	No	3	3
	Plan(s)	R7	Residential	Bedroom	W13	66°N	71	1.0	1.20	2.02	11	0	22	_	169	-	TVU	3	J
	(0)				W14	21°N	1		1.14		0	0							
								1.0		2.34			11	0	Yes	-	No	14	5
	Plan(s)	R8	Residential	LKD	W15	21°N	$\uparrow$		2.20		4	0							
					W16	336°N	↖		0.75		1	0							
								2.0		2.95			5	0	Yes	-	No	20	5
	Plan(s)	R9	Residential	Bedroom	W17	336°N	尽		2.51		3	0							
				- /				1.0		2.51			3	0	Yes		No	22	5
	Plan(s)	R10	Residential	Bedroom	W18	336°N	K		2.31		3	0							
								1.0		2.31			3	0	Yes	-	No	22	5
Block	C Propos	ed																	
	Plan(s)	R1	Residential	Bedroom	W1	271°N	<b>←</b>		0.84		13	0							
C.Gunt	(0)	131	. toolaonidi	200100111	W2	226°	∠ ∠		0.87		30	9							
								1.0		1.71			32	9	Yes	-	Yes	-7	-4
												1							

Planck   P	Prope	rty, room	& wind	low attributes					Day	light (B	RE)	:	Sunligh	nt (BRE	)	Α	DF		APSH	
Pisarka   Pisa			Doom			V	/indow			ADF				APSH	l room	Satisfie	Short-	Satisfie	Shoi	rtfall
Plancis   R.2   Residential   LNO	Floor	Flat no.		Property type	Room use	Ref. &	Orientat	tion	Targe t				VVInte r	Annua I	vvinte r				Annua I	
Plan(s)   R.     Residential Bedracon   W.   1.08   W.   1.09		Plan(s)	R2	Residential	IKD	W3	226°	IZ	(%)		(%)	(%)	(%) g	(%)	(%)	51121	(* := : , ; )	51121	(%)	(%)
Planck   P		i idii(o)	112	rtoolaorillar	LIND								ł							
Planck   P						W5	191°	<b>4</b>		0.16			l .							
Panr(s)   R3						W6	136°	7		0.91		21	0							
Plant s  R4   Residential LD									2.0		2.27			55	9	Yes	-	Yes	-30	-4
Plant   Plan		Plan(s)	R3	Residential	Bedroom	W7	136°	7		0.00		0	0							
Plan(s)   R5   Residential Bedroom   W10   130"   N   1.28   1.482   N   22   2   N   N   0.01   N   N   3   3   3   3   3   3   3   3									1.0		0.00			0	0	No	1.00	No	25	5
Plant   Plan			R4	Residential	LD	W8	191°	<b>\Psi</b>		0.21		3	1							
Plan(s)   R5   Residential Bodroom   W10   136"   w   0.00   0   0   0   0   0   0   0   0						W9	136°	7		1.28		22	2							
Plan(s)   R1   Residential   LD   W11   1911   W   0.00   0.00   No   No   1.00   No   1.00   No   2.5   5   5   1   1   1   1   1   1   1		DI ()		5		14/40	40.50		1.5		1.49			22	2	No	0.01	No	3	3
Plan(s)   R3   Residential   LO   W11   191'     1.52     1.		Plan(s)	R5	Residential	Bedroom	W10	136°	7	4.0	0.00	0.00	0	0	0		Nie	4.00	NI=	25	_
Plan(s)   R7   Residential   Bedroom   W1   316"   M1   316"   M2   316"   M3   M3   M3   M3   M3   M3   M3   M			P6	Pacidential	ID	\\/11	101°	.I.	1.0	0.27	0.00	5	2	0	U	INO	1.00	INO	25	5
Plan(s)   R7   Residential LKD   L			IXO	Residential	LD								ļ.							
Plan(s)						** 12	130	-	1.5	7.02	1.59		_	23	2	Yes	_	No	2	3
W14   S176   W15   W15   W16   W15   W16   W17   W16   W17   W16   W17   W16   W17   W16   W17   W1		Plan(s)	R7	Residential	LKD	W13	136°	7		0.96		21	2							
W16		(-)											i							
Plan(s)   R8   Residential   Bedroom   W17   46 N   2.0   1.0   0.91   0   0   0   0   0   0   0   0   0						W15	136°	Ŋ				1	0							
Plan(s) R8   Residential   Bedroom   W17   46"N   7   0.94"						W16	46°N	7		0.46		0	0							
First Plan(s) R1 Residential Bedroom W1 316" K 201									2.0		1.75			24	2	No*	0.25	No	1	3
First Plan(s) R1 Residential Bedroom W1 316"N K 2.01 7 0 0		Plan(s)	R8	Residential	Bedroom	W17	46°N	7		0.91		0	0							
Plan(s)   R2   Residential   Bedroom   W2   316"   K   2.19									1.0		0.91			0	0	No	0.09	No	25	5
Plan(s)   R2   Residential   Bedroom   W2   316 N   R   2.19   8   0   8   0   765   No   17   5	First	Plan(s)	R1	Residential	Bedroom	W1	316°N	K		2.01		7	0							
Plan(s) R3   Residential LKD   W3   3167N   N   0.66   3   0   0   0   0   0   0   0   0   0									1.0		2.01	_		7	0	Yes	-	No	18	5
Plan(s) R3		Plan(s)	R2	Residential	Bedroom	W2	316°N	K	4.0	2.19	0.40	8	0	0				NI.	4-7	_
Plan(s)   R4   Residential   Bedroom   W5   271 N   +   1.37   22   7   23   7   7   7   7   7   7   7   7   7		Dlan(a)	Da	Desidential	LKD	14/2	24.C°N	_	1.0	0.66	2.19	2		8	0	Yes	-	NO	17	5
Plan(s) R4 Residential Bedroom W5 271°N ← 1.1.4 15 0		Plan(S)	KS	Residerillar	LND								ł							
Plan(s)   R4   Residential   Bedroom   W5   271 N   ←   1.14   1.5   0   0   0   0   0   0   0   0   0						VV- <del>1</del>	Z/1 IV	_	2.0	1.57	2 03	22	,	23	7	Yes	_	Win only	2	-2
We   226°   W   1.17   36		Plan(s)	R4	Residential	Bedroom	W5	271°N	<b>←</b>	2.0	1.14	2.00	15	0	20	,	103		vviii oriiy		_
Plan(s)         R5         Residential         Bedroom         W7         226°         k         2.49         46         12         Yes         -         Yes         -21         -7           Plan(s)         R6         Residential         LKD         W8         226°         k         1.22         46         12         Yes         -         Yes         -21         -7           Plan(s)         R6         Residential         LKD         W8         226°         k         1.22         46         12         Yes         -         Yes         -21         -7           W10         191°         ↓         0.17°         6         5		(5)											l .							
Plan(s)   R6   Residential   LKD   W8   226°									1.0		2.31			40	11	Yes	-	Yes	-15	-6
Plan(s) R6 Residential LKD W8 226°		Plan(s)	R5	Residential	Bedroom	W7	226°	ĸ		2.49		46	12							
W9 136° N 0.15									1.0		2.49		Ì	46	12	Yes	-	Yes	-21	-7
W10   191°		Plan(s)	R6	Residential	LKD	W8	226°	Ľ		1.22		46	12							
W11   136'   S   0.86   29   3						W9	136°	7		0.15			1							
Plan(s) R7   Residential   Bedroom   W12   136°   N   0.26							191°						ł							
Plan(s) R7   Residential   Bedroom   W12   136°   ×   0.26   1   1   1   No   0.74   No   24   4						W11	136°	7		0.86		29	3							_
R8 Residential LD W13 191* ↓ 0.33 6 3		Dis. (a)	D.7	Desidential	D	14/40	4269			0.00	2.40	_	4	68	13	Yes	-	Yes	-43	-8
R8 Residential LD W13 191° ↓ 0.33 6 3		Pian(s)	R/	Residential	Rearoom	W12	136	7		0.26	0.26	7	7	4	4	No	0.74	No	24	4
W14   136°   N   1.19   32   5   N   N   N   N   N   N   N   N   N			P.O	Residential	LD	W/13	191°	J.	1.0	0.33	0.26	6	3			INO	0.74	IVO	24	4
Plan(s) R9   Residential Bedroom   W15   136°   \( \)			1.0	residential									1							
Plan(s)       R9       Residential       Bedroom       W15       136°       ¥       0.28       1       1       No       0.72       No       24       4         R10       Residential       LD       W16       191°       ↓       0.35       6       3									1.5		1.52			32	5	Yes	-	Yes	-7	0
1.0		Plan(s)	R9	Residential	Bedroom	W15	136°	N		0.28		1	1							
W17   136°   W   1.50   29   3   Yes   - Ann only   -4   2		, ,							1.0		0.28			1	1	No	0.72	No	24	4
Plan(s) R11   Residential Bedroom   W18   136°   \( \)			R10	Residential	LD	W16	191°	$\downarrow$		0.35		6	3							
Plan(s)       R11       Residential       Bedroom       W18       136°       №       0.32       0       0       No       0.68       No       25       5         R12       Residential       LD       W19       191°       ↓       0.37       8       5						W17	136°	Ŋ		1.20		29	3							
R12   Residential LD   W19   191°									1.5		1.55			29	3	Yes	-	Ann only	-4	2
R12 Residential LD W19 191° ↓ 0.37 8 5		Plan(s)	R11	Residential	Bedroom	W18	136°	7		0.32		0	0							
W20 136° N									1.0		0.32			0	0	No	0.68	No	25	5
Plan(s) R13 Residential LKD   W21 136° × 0.89   27   4			R12	Residential	LD															
Plan(s)       R13       Residential       LKD       W21       136°       №       0.89       27       4						W20	136°	Я	1 -	1.21	1.50	29	4	20		V		Vo-	F	_
W22 81°N → 0.13 3 0		Dlan(a)	D12	Decidential	IKD	\\\\24	12 <i>6</i> °	N.	1.5	0.00	1.58	27	1	30	5	res	•	res	-5	U
W23   136°   N   0.16   1   0		1 1011(5)	1/10	residential	בועם								ł							
W24   46°N   7   0.43   1   0																				
2.0   1.61   29   4   No*   0.39   Ann only   -4   1													1							
Plan(s) R14 Residential Bedroom W25 46°N 7 0.92 0 0 0 No 0.08 No 25 5									2.0		1.61			29	4	No*	0.39	Ann only	-4	1
1.0 0.92 0 0 No 0.08 No 25 5		Plan(s)	R14	Residential	Bedroom	W25	46°N	7				0	0							
Plan(s) R15 Residential Bedroom W26 46°N ⊅ 0.43 0 0									1.0		0.92			0	0	No	0.08	No	25	5
		Plan(s)	R15	Residential	Bedroom	W26	46°N	7		0.43		0	0							

Proper	ty, room	& windo	ow attributes					Day	/light (B	RE)		Sunligh	nt (BRE	)	Al	DF		APSH	
	,				V	Vindow			ADF		AP	ъп	ADSL	l room	Satisfie	Short-	Satisfie	Sho	rtfall
Floor	Flat no.	ref.	Property type	Room use	Ref. 8	. Orientat	tion	Targe t	ADF win	ADF	Anħü' al	dow Winte r	Annua I	vvinte r	S BRE2	fall (ADF%)	s BRE?	Annua I	vv inte r
					W27	1°N	<b>1</b>	(%)	0.88	(%)	(%)	(%)	(%)	(%)	DILL:	(ADI 70)	DILL:	(%)	(%)
					VVZI	T 14		1.0	0.00	1.31	0		0	0	Yes	-	No	25	5
	Plan(s)	R16	Residential	LKD	W28	1°N	1		1.02		0	0							
					W29	316°N	⋉		0.68		3	0							
								2.0		1.70			3	0	No*	0.30	No	22	5
	Plan(s)	R17	Residential	Bedroom	W30	316°N	K		2.23		7	0							_
	Plan(a)	R18	Residential	Bedroom	W31	316°N	K	1.0	2.03	2.23	6	0	7	0	Yes	-	No	18	5
	Plan(s)	KIO	Residential	Dealooni	WSI	310 N	1	1.0	2.03	2.03	O	0	6	0	Yes	-	No	19	5
Second	Plan(s)	R1	Residential	Bedroom	W1	316°N	K	1.0	2.17	2.00	9	0			100		140		
								1.0		2.17			9	0	Yes	-	No	16	5
	Plan(s)	R2	Residential	Bedroom	W2	316°N	⋉		2.38		9	0							
								1.0		2.38			9	0	Yes	-	No	16	5
	Plan(s)	R3	Residential	LKD	W3	316°N	K		0.72		4	0							
					W4	271°N	<b>←</b>	2.0	1.56	0.00	26	9	00		V	_	V	4	
	Plan(s)	R4	Residential	Bedroom	W5	271°N	<b>←</b>	2.0	1.24	2.28	21	2	26	9	Yes	-	Yes	-1	-4
	(3)		. toolaoililai	200100111	W6	226°	L L		1.24		39	14							
								1.0		2.48			47	14	Yes	-	Yes	-22	-9
	Plan(s)	R5	Residential	Bedroom	W7	226°	Ľ		2.66		51	17							
								1.0		2.66			51	17	Yes	-	Yes	-26	-12
	Plan(s)	R6	Residential	LKD	W8	226°	Ľ		1.30		49	15							
					W9	136°	7		0.24		1	1							
					W10	191°	<b>V</b>		0.24		9	8							
					W11	136°	7	2.0	0.97	2.75	36	6	76	17	Yes	_	Yes	-51	-12
	Plan(s)	R7	Residential	Redroom	W12	136°	V	2.0	0.65	2.75	3	1	70	17	162	-	162	-51	-12
	i idii(o)	107	rtoolaonilai	Dodroom	****	130		1.0	0.00	0.65		,	3	1	No	0.35	No	22	4
		R8	Residential	LD	W13	191°	<b>4</b>		0.42		12	9							
					W14	136°	И		1.34		36	6							
								1.5		1.76			39	9	Yes	-	Yes	-14	-4
	Plan(s)	R9	Residential	Bedroom	W15	136°	7		0.65		4	2							
								1.0		0.65			4	2	No	0.35	No	21	3
		R10	Residential	LD	W16	191°	<b>V</b>		0.43		12	9							
					W17	136°	7	1.5	1.35	1.77	37	7	40	10	Yes	_	Yes	-15	-5
	Plan(s)	R11	Residential	Bedroom	W18	136°	V	1.5	0.65	1.77	4	2	40	10	162	-	162	-15	-5
	(-)							1.0		0.65			4	2	No	0.35	No	21	3
		R12	Residential	LD	W19	191°	4		0.45		12	9							
					W20	136°	7		1.35		32	6							
								1.5		1.79			35	9	Yes	-	Yes	-10	-4
	Plan(s)	R13	Residential	LKD	W21	136°	7		0.98		31	6							
					W22	81°N	→		0.17		5	0							
					W23 W24	136° 46°N	71		0.24 0.47		2	0							
					VV24	-70 IV	,	2.0	J. <del>4</del> 1	1.87	,		35	7	No*	0.13	Yes	-10	-2
	Plan(s)	R14	Residential	Bedroom	W25	46°N	7		1.01		0	0					. 50		_
	. ,							1.0		1.01			0	0	Yes	-	No	25	5
	Plan(s)	R15	Residential	Bedroom	W26	46°N	7		0.48		0	0							
					W27	1°N	$\uparrow$		0.94		0	0							
	Di- ( )	D.10	D	LKD	14/00	4000		1.0		1.42			0	0	Yes	-	No	25	5
	Plan(s)	R16	Residential	LKD	W28	1°N	↑ <u></u>		1.11		1	0							
					W29	316°N	1	2.0	0.72	1.83	4	0	5	0	No*	0.17	No	20	5
	Plan(s)	R17	Residential	Bedroom	W30	316°N	K	2.0	2.38	1.00	9	0			140	0.17	140	20	J
	(0)	,			. 30			1.0	50	2.38			9	0	Yes	-	No	16	5
	Plan(s)	R18	Residential	Bedroom	W31	316°N	K		2.18		8	0							
								1.0		2.18			8	0	Yes	-	No	17	5
Third	Plan(s)	R1	Residential	Bedroom	W1	316°N	尽		2.32		10	0							
			_					1.0		2.32			10	0	Yes	-	No	15	5
	Plan(s)	R2	Residential	Bedroom	W2	316°N	K	4.0	2.55	0.55	10	0	4.0	0	V		N.I.	4.5	_
								1.0		2.55			10	0	Yes	-	No	15	5

Prope	rty, room	& wind	ow attributes					Day	ylight (B	RE)		Sunligh	nt (BRE	)	Al	DF		APSH	
		_			١ ١	Vindow			ADF		AP	оп	APSH	lroom	Satisfie	Short-	Satisfie	Sho	rtfall
Floor	Flat no.	Room ref.	Property type	Room use	Ref 8	k Orienta	tion	Targe	ADF win	ADF		VVInte	Annua		S	fall	S	Annua	
								(%)	/0//	(%)	al (%)	(%)	(%)	r (%)	BRE?	(ADF%)	BRE?	(%)	r (%)
	Plan(s)	R3	Residential	LKD	W3	316°N	K		0.77		5	0							
					W4	271°N	<b>←</b>	2.0	2.51	2.00	36	9	20		Vaa		V	44	4
	Plan(s)	R4	Residential	Podroom	W5	271°N	<b>←</b>	2.0	1.33	3.28	22	3	36	9	Yes	-	Yes	-11	-4
	i iaii(s)	114	Residential	Deuroom	W6	226°	<u>L</u>		1.30		40	15							
					****	220		1.0	1.00	2.62	70	70	48	15	Yes	-	Yes	-23	-10
	Plan(s)	R5	Residential	Bedroom	W7	226°	ĸ		2.80		53	19							
	. ,							1.0		2.80			53	19	Yes	-	Yes	-28	-14
	Plan(s)	R6	Residential	LKD	W8	226°	Ľ		1.37		53	19							
					W9	136°	7		0.28		4	4							
					W10	191°	$\downarrow$		0.25		8	8							
					W11	136°	7		1.10		42	10							
								2.0		2.99			85	24	Yes	-	Yes	-60	-19
	Plan(s)	R7	Residential	Bedroom	W12	136°	7		0.69		4	2							
		Do	Desidential	1.0	14/40	4049		1.0	0.40	0.69	40	_	4	2	No	0.31	No	21	3
		R8	Residential	LD	W13 W14	191° 136°	7ı ↑		0.43 1.50		12 41	9							
					VV 1-4	130	-24	1.5	1.50	1.93	71	10	43	12	Yes	_	Yes	-18	-7
	Plan(s)	R9	Residential	Bedroom	W15	136°	7	1.0	0.92	1.00	8	5	10	12	100		100		,
	(-)							1.0		0.92			8	5	No	0.08	Win only	17	0
		R10	Residential	LD	W16	191°	<b>4</b>		0.50		15	12							
					W17	136°	7		1.50		43	12							
								1.5		2.00			45	14	Yes	-	Yes	-20	-9
	Plan(s)	R11	Residential	Bedroom	W18	136°	7		0.90		7	4							
								1.0		0.90			7	4	No	0.10	No	18	1
		R12	Residential	LD	W19	191°	<b>V</b>		0.52		15	12							
					W20	136°	7		1.49		41	13							
								1.5		2.01			43	15	Yes	-	Yes	-18	-10
	Plan(s)	R13	Residential	LKD	W21	136°	7		1.08		39	12							
					W22 W23	81°N 136°	→ >		0.21		6	2							
					W24	46°N	7		0.53		2	0							
					***	40 14		2.0	0.00	2.20	_		42	13	Yes	-	Yes	-17	-8
	Plan(s)	R14	Residential	Bedroom	W25	46°N	7		1.14	2.20	0	0							
								1.0		1.14			0	0	Yes	-	No	25	5
	Plan(s)	R15	Residential	Bedroom	W26	46°N	7		0.55		0	0							
					W27	1°N	$\uparrow$		0.99		0	0							
								1.0		1.54			0	0	Yes	-	No	25	5
	Plan(s)	R16	Residential	LKD	W28	1°N	$\uparrow$		1.20		1	0							
					W29	316°N	K		0.76		5	0							
	DI ()	D.1=	D. 11	D	1415 -	21000		2.0	6 55	1.96			5	0	No*	0.04	No	20	5
	Plan(s)	R17	Residential	Bedroom	W30	316°N	K	1.0	2.52	0.50	10	0	10	0	Ver		Me	45	E
	Plan(s)	R18	Residential	Redroom	W31	316°N	K	1.0	2.31	2.52	10	0	10	0	Yes	-	No	15	5
	1 1011(5)	1110	residential	Deuroum	1000	JIU N		1.0	2.31	2.31	10	U	10	0	Yes	-	No	15	5
Fourth	Plan(s)	R1	Residential	Bedroom	W1	226°	Ľ	7.5	1.34		37	15	1.0		100		140		
	(-)				W2	136°	7		1.16		12	8							
								1.0		2.50			49	23	Yes	-	Yes	-24	-18
		R2	Residential	LD	W3	191°	<b>4</b>		0.59		20	17							
					W4	136°	7		1.65		49	16							
								1.5		2.24			53	20	Yes	-	Yes	-28	-15
	Plan(s)	R3	Residential	Bedroom	W5	136°	7		1.09		12	8							
		_						1.0		1.09			12	8	Yes		Win only	13	-3
		R4	Residential	LD	W6	191°	<b>V</b>		0.58		18	15							
					W7	136°	7	1.5	1.63	2.20	46	16	40	10	\/		V	00	40
	Plan(s)	R5	Residential	IKD	W8	136°	Z	1.5	1.19	2.22	45	17	48	18	Yes	-	Yes	-23	-13
	1 1011(5)	CO	residential	בועם	W9	81°N	→		0.25		45 8	1							
					W10	136°	7		0.47		7	6							
					W11	46°N	7		0.61		3	0							
								2.0		2.51			48	17	Yes	-	Yes	-23	-12
	Plan(s)	R6	Residential	Bedroom	W12	46°N	7		1.31		0	0							



rope	rty, room	& windo	ow attributes					рау	light (B	RE)		Sunligh	it (BRE		ΑI	)F		APSH	
		D			٧	Vindow			ADF		AP	sп dow	APSH	room	Satisfie	Short-	Satisfie	Sho	rtfall
Floor	Flat no.	Room ref.	Property type	Room use	D. ( 6			Targe	ADF	ADF	Annu	Winte	Annua	vvinte	s	fall	s	Annua	wint
					Rei. c	& Orienta	tion	(%)	win (%)	(%)	al (%)	r (%)	   (%)	r (%)	BRE?	(ADF%)	BRE?	 (%)	r (%)
								1.0		1.31			0	0	Yes	•	No	25	5
	Plan(s)	R7	Residential	Bedroom	W13	46°N	7		0.64		0	0							
					W14	1°N	$\uparrow$		1.05		0	0							
								1.0		1.69			0	0	Yes	-	No	25	5
	Plan(s)	R8	Residential	LKD	W15	1°N	$\uparrow$		1.29		1	0							
					W16	316°N	K		0.78		5	0							
								2.0		2.07			5	0	Yes	-	No	20	5
	Plan(s)	R9	Residential	Bedroom	W17	316°N	K		2.60		10	0							
								1.0		2.60			10	0	Yes	-	No	15	5
	Plan(s)	R10	Residential	Bedroom	W18	316°N	K		2.38		10	0							
								1.0		2.38			10	0	Yes	-	No	15	5
Fifth	Plan(s)	R1	Residential	Bedroom	W1	226°	Ľ		1.48		40	15	Ì						
					W2	136°	Ŋ		1.14		9	7							
								1.0		2.62			49	22	Yes	-	Yes	-24	-17
		R2	Residential	LD	W3	191°	<b>4</b>		0.59		18	15							
					W4	136°	N		1.79		50	17							
								1.5		2.38			53	20	Yes		Yes	-28	-15
	Plan(s)	R3	Residential	Bedroom	W5	136°	N		1.07		9	7							
	,							1.0		1.07			9	7	Yes	-	Win only	16	-2
		R4	Residential	LD	W6	191°	<b>4</b>		0.57		17	14							
					W7	136°	V		1.77		50	18							
								1.5		2.34			52	20	Yes		Yes	-27	-15
	Plan(s)	R5	Residential	LKD	W8	136°	V		1.28		48	18							
	(-)				W9	81°N	$\rightarrow$		0.24		7	2							
					W10	136°	7		0.45		6	5							
					W11	46°N	7		0.71		5	0							
								2.0	****	2.69	-	_	51	18	Yes		Yes	-26	-13
	Plan(s)	R6	Residential	Bedroom	W12	46°N	7	2.0	1.53	2.00	0	0	0.		. 00				
	α(ο)		1100100111101	200.00	****			1.0	7.00	1.53			0	0	Yes	-	No	25	5
	Plan(s)	R7	Residential	Bedroom	W13	46°N	7	1.0	0.75	1.00	0	0			100		140		
	. 1011(3)	1.1	. toolaonilai	230100111	W14	1°N	<b>↑</b>		1.12		0	0							
					** 14	~ 11		1.0	1.12	1.86		J	0	0	Yes	_	No	25	5
	Plan(s)	R8	Residential	IKD	W15	1°N	1	1.0	2.15	1.00	1	0			103		140	20	3
	1 1011(5)	1/0	residerilidi	LIND	W16	316°N			0.79		5	0							
					VV 10	210 IV	1	2.0	0.79	2.94	5	U	5	0	Yes	-	No	20	5
	Plan(s)	R9	Posidontial	Podroom	W17	216941	E	2.0	2.63	2.54	10	0	U	U	162		INU	20	3
	Plan(s)	K9	Residential	Beuroom	VV 17	316°N	K	1.0	2.03	2.62	10	0	10	0	Voo	_	NIO	15	
	Diag(s)	D40	Dooldantic	Dodres	10/40	24.000	_	1.0	2.44	2.63	10		10	0	Yes	-	No	15	5
	Plan(s)	R10	Residential	Bedroom	W18	316°N	K	4.0	2.41	0.44	10	0	4.0	0	V		NI	45	-
								1.0		2.41			10	0	Yes	-	No	15	5



Proper	rty, room	& wind	low attributes					Day	/light (B	RE)		Sunligh	nt (BRE	)	Al	OF .		APSH	
		Room			V	Vindow			ADF			он dow winte	APSH	l room	Satisfie				rtfall
Floor	Flat no.	ref.	Property type	Room use	Ref. &	Orientat	ion	Targe t	ADF win	ADF	Annu al	vvinte r	Annua I	vvinte r	s BRE?	fall (ADF%)	s BRE?	Annua I	vvinte r
								(%)	/0/_1	(%)	10/1	(0/_)	(%)	(%)		,		(%)	(%)
Block	A Propos	ed																	
Ground	Plan(s)	R1	Residential	KD	W1	40°N	7		0.73		2	0							
					W2	40°N	7		0.26		2	0							
					W3	310°N	K		1.51		4	0							
								2.0		2.50			6	0	Yes	-	No	19	5
	Plan(s)	R2	Residential	Bedroom	W4	310°N	K		1.94		4	0		_					_
	Diam(a)	Do	Danislastial	Dadwas	14/5	24.0001	_	1.0	4 77	1.94	1		4	0	Yes	-	No	21	5
	Plan(s)	R3	Residential	Bearoom	W5	310°N	K	1.0	1.77	1.77	4	0	4	0	Yes	-	No	21	5
	Plan(s)	R4	Residential	Redroom	W6	265°	<b>←</b>	1.0	1.82	1.77	20	5	4	0	162	-	INO	21	5
	1 1011(3)	11.4	residential	Dearoom	****	203	•	1.0	1.02	1.82	20		20	5	Yes	_	Win only	5	0
	Plan(s)	R5	Residential	Living Room	W7	265°	<b>←</b>		1.43		25	5							Ü
	(-)			<b>3</b>	W8	220°	ĸ		1.44		35	13							
								1.5		2.87			36	13	Yes	-	Yes	-11	-8
	Plan(s)	R6	Residential	Bedroom	W9	220°	ĸ		0.83		8	7							
								1.0		0.83			8	7	No	0.17	Win only	17	-2
	Plan(s)	R7	Residential	LKD	W10	275°N	$\leftarrow$		0.43		14	0							
					W11	220°	Ľ		1.25		33	9							
								2.0		1.67			34	9	No*	0.33	Yes	-9	-4
First	Plan(s)	R1	Residential	Bedroom	W1	220°	Ľ		1.26		15	8							
								1.0		1.26			15	8	Yes	-	Win only	10	-3
	Plan(s)	R2	Residential	Living Room	W2	220°	Ľ		1.70		21	6							
	DI ()	-	D	1/5	1440			1.5		1.70			21	6	Yes	-	Win only	4	-1
	Plan(s)	R3	Residential	KD	W3	175°	4	0.0	0.81	0.04	6	3			NI.	4.40	NI.	40	
	Plan(s)	R4	Residential	Podroom	W4	175°	<b>4</b>	2.0	0.35	0.81	0	0	6	3	No	1.19	No	19	2
	Plan(s)	K4	Residential	Deuroom	VV 4	1/5	Ψ	1.0	0.33	0.35	U	0	0	0	No	0.65	No	25	5
	Plan(s)	R5	Residential	Bedroom	W5	130°	Z	1.0	0.99	0.33	13	1	0	0	INU	0.03	INO	25	3
	1 1011(3)	11.5	residential	Dearoom	VVS	130		1.0	0.00	0.99	10	,	13	1	No	0.01	No	12	4
	Plan(s)	R6	Residential	KD	W6	130°	7		1.15	0.00	18	2				0.01	110		
	(5)							2.0		1.15			18	2	No	0.85	No	7	3
	Plan(s)	R7	Residential	Living Room	W7	130°	7		1.32		22	2							
					W8	40°N	7		0.99		0	0							
								1.5		2.30			22	2	Yes	-	No	3	3
	Plan(s)	R8	Residential	Bedroom	W9	40°N	7		0.69		0	0							
								1.0		0.69			0	0	No	0.31	No	25	5
	Plan(s)	R9	Residential	Bedroom	W10	95°	$\rightarrow$		0.51		7	2							
					W11	40°N	7		1.75		3	0							
								1.0		2.26			8	2	Yes	-	No	17	3
	Plan(s)	R10	Residential	Bedroom	W12	40°N	7	, -	1.81	,	3	0		_					_
	Dlon/=\	D44	Residential	Podroom	10/40	40001	-	1.0	0.05	1.81	4	0	3	0	Yes	-	No	22	5
	Plan(s)	R11	residential	Dearoom	W13	40°N	7	1.0	0.95	0.95	1	0	1	0	No	0.05	No	24	5
	Plan(s)	R12	Residential	LKD	W14	95°	<b>→</b>	1.0	0.36	0.95	7	0		U	INO	0.05	No	24	5
	1 1011(3)	1112	rooluciiidi	_,,,,	W15	40°N	7		0.96		4	0							
								2.0	0.00	1.32			7	0	No	0.68	No	18	5
	Plan(s)	R13	Residential	Bedroom	W16	40°N	7		1.34		3	0				2.30			
	(-)							1.0		1.34			3	0	Yes	-	No	22	5
	Plan(s)	R14	Residential	Bedroom	W17	40°N	71		1.11		1	0							
								1.0		1.11			1	0	Yes	-	No	24	5
	Plan(s)	R15	Residential	LKD	W18	95°	$\rightarrow$		0.32		6	0							
					W19	40°N	7		0.92		2	0							
								2.0		1.24			6	0	No	0.76	No	19	5
	Plan(s)	R16	Residential	Bedroom	W20	40°N	7		1.52		2	0							
					W21	345°N	$\uparrow$		0.50		0	0							
								1.0		2.02			2	0	Yes	-	No	23	5
	Plan(s)	R17	Residential	Bedroom	W22	40°N	7	, -	0.91	0.51	1	0		_		0.55			_
	Dlon/=\	D40	Dooidestis	LKD	Maa	40001	-	1.0	0.40	0.91	2		1	0	No	0.09	No	24	5
	Plan(s)	R18	Residential	LVD	W23 W24	40°N 310°N	7		0.48 1.34		2	0							
					W25	310 N	K		1.34		6 6	0							
					VV20	210 IV	- 1		1.22		U	U							



Proper	rty, room	& wind	low attributes					Day	rlight (B	RE)	:	Sunligh	t (BRE	)	Al	DF .		APSH	
	<b>3</b> ,				V	/indow		,	ADF	,	AP	ЗΠ	APSH	room	Satisfie	Short-	Satisfie	Sho	rtfall
Floor	Flat no.	Room ref.	Property type	Room use	Ref &	Orientat	tion	l arge t	ADF win	ADF		dow Winte r	Annua	Winte	s	fall	s	Annua	winte
					Nei. α	Onema	11011	(%)	(%)	(%)	al (%)	(%)	(%)	(%)	BRE?	(ADF%)		(%)	r (%)
	Diag(a)	D40	Desidential	Dadaaaa	MOC	24001	_	2.0	0.00	3.05	_	0	8	0	Yes	-	No	17	5
	Plan(s)	R19	Residential	Bedroom	W26	310°N	K	1.0	2.03	2.03	5	0	5	0	Yes	-	No	20	5
	Plan(s)	R20	Residential	Bedroom	W27	265°	<b>←</b>	1.0	2.02	2.03	25	6	5	0	168	-	INO	20	5
	1 1011(0)	1120	rtoolaorillar	Bouloom	***	203		1.0	2.02	2.02	20		25	6	Yes	_	Yes	0	-1
	Plan(s)	R21	Residential	LKD	W28	265°	<b>←</b>		0.68	,	19	2							-
	. ,				W29	220°	Ľ		1.54		27	13							
								2.0		2.22			32	13	Yes	-	Yes	-7	-8
	Plan(s)	R22	Residential	Bedroom	W30	220°	Ľ		1.90		41	16							
								1.0		1.90			41	16	Yes	-	Yes	-16	-11
	Plan(s)	R23	Residential	Bedroom	W31	220°	Ľ		2.52		39	12							
	51 ()	504	5		14/00			1.0		2.52			39	12	Yes	-	Yes	-14	-7
	Plan(s)	R24	Residential	LKD	W32	220°	Ľ	2.0	1.23	1 22	28	14	20	14	No	0.77	Voc	2	
Second	Plan(s)	R1	Residential	Bedroom	W1	220°	ĸ	2.0	1.35	1.23	17	10	28	14	No	0.77	Yes	-3	-9
OCCOR	1 1011(3)	13.1	residential	Dearoom	** .	220	_	1.0	7.50	1.35	- / /	70	17	10	Yes	_	Win only	8	-5
	Plan(s)	R2	Residential	Living Room	W2	220°	ĸ		1.83	1.00	22	7			. 00				
	,							1.5		1.83			22	7	Yes	-	Win only	3	-2
	Plan(s)	R3	Residential	KD	W3	175°	<b>4</b>		0.88		6	3							
								2.0		0.88			6	3	No	1.12	No	19	2
	Plan(s)	R4	Residential	Bedroom	W4	175°	$\downarrow$		0.39		0	0							
								1.0		0.39			0	0	No	0.61	No	25	5
	Plan(s)	R5	Residential	Bedroom	W5	130°	7		1.00		13	1							
	DI ()		5	1/0	1440			1.0		1.00	40		13	1	Yes	-	No	12	4
	Plan(s)	R6	Residential	KD	W6	130°	7	2.0	1.17	1.17	18	2	18	2	No	0.83	No	7	3
	Plan(s)	R7	Residential	Living Room	W7	130°	7	2.0	1.34	1.17	22	2	10		INU	0.63	NO	- 1	3
	i iaii(s)	IXI	Residential	Living Room	W8	40°N	7		1.01		0	0							
						10 11		1.5		2.35	Ü		22	2	Yes	-	No	3	3
	Plan(s)	R8	Residential	Bedroom	W9	40°N	7		0.71		0	0							
								1.0		0.71			0	0	No	0.29	No	25	5
	Plan(s)	R9	Residential	Bedroom	W10	95°	$\rightarrow$		0.52		7	2							
					W11	40°N	7		1.79		3	0							
								1.0		2.31			8	2	Yes	-	No	17	3
	Plan(s)	R10	Residential	Bedroom	W12	40°N	7		1.85		3	0		_					_
	Dlan(a)	D11	Desidential	Dadraam	10/12	40001	-	1.0	0.06	1.85	1	0	3	0	Yes	-	No	22	5
	Plan(s)	R11	Residential	Dearoom	W13	40°N	7	1.0	0.96	0.96	1	0	1	0	No	0.04	No	24	5
	Plan(s)	R12	Residential	LKD	W14	95°	<b>→</b>	1.0	0.37	0.30	7	0	'	0	140	0.04	140	24	3
	(-)				W15	40°N	7		0.98		4	0							
								2.0		1.35			7	0	No	0.65	No	18	5
	Plan(s)	R13	Residential	Bedroom	W16	40°N	7		1.37		3	0							
								1.0		1.37			3	0	Yes	-	No	22	5
	Plan(s)	R14	Residential	Bedroom	W17	40°N	7		1.13		1	0							
	<b>D</b>		5	11/5	1411			1.0		1.13			1	0	Yes	-	No	24	5
	Plan(s)	R15	Residential	LKD	W18	95°	<b>→</b>		0.33		6	0							
					W19	40°N	7	2.0	0.94	1.27	2	0	6	0	No	0.73	No	19	5
	Plan(s)	R16	Residential	Bedroom	W20	40°N	71	2.0	1.56	1.21	2	0	0		NU	0.73	140	13	J
	(0)	0			W21	345°N	<b>1</b>		0.52		0	0							
								1.0		2.08			2	0	Yes	-	No	23	5
	Plan(s)	R17	Residential	Bedroom	W22	40°N	7		0.95		1	0							
								1.0		0.95			1	0	No	0.05	No	24	5
	Plan(s)	R18	Residential	LKD	W23	40°N	7		0.50		2	0							
					W24	310°N	_		1.46		9	0							
					W25	310°N	K	0.0	1.34	0.00	10	0	40		\/ · ·		NI.	40	_
	Plan(s)	R19	Residential	Bedroom	W26	310°N	K	2.0	2.24	3.29	8	0	12	0	Yes	-	No	13	5
	1 1011(5)	1(19	residential	Deulouiii	VVZU	310 IV	1	1.0	2.24	2.24	O	U	8	0	Yes	-	No	17	5
	Plan(s)	R20	Residential	Bedroom	W27	265°	+		2.24		29	7			. 30				
	(-)							1.0		2.24			29	7	Yes	-	Yes	-4	-2
	Plan(s)	R21	Residential	LKD	W28	265°	<b>←</b>		0.74		24	4							



Proper	ty, room	& wind	ow attributes					Day	light (B	RE)	;	Sunligh	nt (BRE	)	Al	OF .		APSH	
		Doom			W	/indow			ADF		AP win		APSH	room	Satisfie	Short-	Satisfie	Shoi	rtfall
Floor	Flat no.	Room ref.	Property type	Room use	Ref. &	Orientat	tion	Targe t	ADF win	ADF	Anhu al	dow Winte r	Annua I	Winte r	s BRE?	fall (ADF%)	s BRE?	Annua I	winte r
					W29	220°	L L	(%)	1.68	(%)	34	17	(%)	(%)	51121	( 12 ) 10)	51121	(%)	(%)
							_	2.0		2.42			39	17	Yes	-	Yes	-14	-12
	Plan(s)	R22	Residential	Bedroom	W30	220°	Ľ		2.02		46	20							
								1.0		2.02			46	20	Yes	-	Yes	-21	-15
	Plan(s)	R23	Residential	Bedroom	W31	220°	Ľ	4.0	2.66	0.00	44	16	4.4	4.0			V	40	44
	Plan(s)	R24	Residential	IKD	W32	220°	ĸ	1.0	1.33	2.66	32	17	44	16	Yes	-	Yes	-19	-11
	1 1011(3)	1124	residential	LIND	VV 32	220	Ē	2.0	7.55	1.33	32	,,	32	17	No	0.67	Yes	-7	-12
Third	Plan(s)	R1	Residential	Bedroom	W1	220°	Ľ		1.42		19	12							
								1.0		1.42			19	12	Yes	-	Win only	6	-7
	Plan(s)	R2	Residential	Living Room	W2	220°	Ľ		1.94		24	9							
	Dlon(a)	Do	Decidential	KD	WO	4750		1.5	0.07	1.94	11	1	24	9	Yes	-	Win only	1	-4
	Plan(s)	R3	Residential	KD	W3	175°	<b>\</b>	2.0	0.97	0.97	11	4	11	4	No	1.03	No	14	1
	Plan(s)	R4	Residential	Bedroom	W4	175°	<b>V</b>	2.0	0.44	0.31	0	0	- 11	4	INO	1.03	INO	17	•
	(-,							1.0		0.44			0	0	No	0.56	No	25	5
	Plan(s)	R5	Residential	Bedroom	W5	130°	7		1.01		13	1							
								1.0		1.01			13	1	Yes	-	No	12	4
	Plan(s)	R6	Residential	KD	W6	130°	7		1.19		18	2							
								2.0		1.19		_	18	2	No	0.81	No	7	3
	Plan(s)	R7	Residential	Living Room	W7 W8	130° 40°N	7		1.37		22	2							
					VVO	40 N	/	1.5	1.03	2.40	0	0	22	2	Yes	_	No	3	3
	Plan(s)	R8	Residential	Bedroom	W9	40°N	7	1.5	0.72	2.40	0	0		_	103		140	3	3
	(-)							1.0		0.72			0	0	No	0.28	No	25	5
	Plan(s)	R9	Residential	Bedroom	W10	95°	$\rightarrow$		0.53		7	2							
					W11	40°N	7		1.83		3	0							
								1.0		2.36			8	2	Yes	-	No	17	3
	Plan(s)	R10	Residential	Bedroom	W12	40°N	7		1.89	4.00	3	0	0						_
	Dlon(a)	R11	Residential	Bedroom	W13	40°N	71	1.0	0.98	1.89	1	0	3	0	Yes	-	No	22	5
	Plan(s)	KII	Residential	Deulooni	W 13	40 N		1.0	0.90	0.98	1	U	1	0	No	0.02	No	24	5
	Plan(s)	R12	Residential	LKD	W14	95°	<b>→</b>		0.38	0.00	7	0				0.02	7,10		
	. ,				W15	40°N	7		1.00		4	0							
								2.0		1.38			7	0	No	0.62	No	18	5
	Plan(s)	R13	Residential	Bedroom	W16	40°N	7		1.40		3	0							
								1.0		1.40			3	0	Yes	-	No	22	5
	Plan(s)	R14	Residential	Bedroom	W17	40°N	71	1.0	1.15	1 15	1	0	4	0	Voo		No	24	E
	Plan(s)	R15	Residential	IKD	W18	95°	$\rightarrow$	1.0	0.34	1.15	6	0	1	0	Yes	-	No	24	5
	1 1011(3)	1(10	residential	LIND	W19	40°N	7		0.96		2	0							
								2.0		1.30			6	0	No	0.70	No	19	5
	Plan(s)	R16	Residential	Bedroom	W20	40°N	71		1.59		2	0							
					W21	345°N	$\uparrow$		0.54		0	0							
		_						1.0		2.13			2	0	Yes	-	No	23	5
	Plan(s)	R17	Residential	Bedroom	W22	40°N	7	1.0	0.98	0.00	1	0	4	0	NI-	0.00	Ne	24	E
	Plan(s)	R18	Residential	LKD	W23	40°N	7	1.0	0.51	0.98	2	0	1	0	No	0.02	No	24	5
	i idii(3)	1110	Residential	LIND	W24	310°N			1.55		10	0							
					W25	310°N	K		1.43		10	0							
								2.0		3.50			12	0	Yes	-	No	13	5
	Plan(s)	R19	Residential	Bedroom	W26	310°N	K		2.41		10	0							
								1.0		2.41			10	0	Yes	-	No	15	5
	Plan(s)	R20	Residential	Bedroom	W27	265°	<b>←</b>	4.0	2.42	0.15	31	8	6.1		\ <u>'</u>				
	Plan(s)	R21	Residential	LKD	W28	265°	<b>←</b>	1.0	0.79	2.42	26	5	31	8	Yes	-	Yes	-6	-3
	1 1011(5)	1141	Nosidefilial	LIND	W29	20°	∠		1.80		35	18							
					0			2.0		2.59		, 3	41	18	Yes	-	Yes	-16	-13
	Plan(s)	R22	Residential	Bedroom	W30	220°	Ľ		2.12		46	20							
								1.0		2.12			46	20	Yes	-	Yes	-21	-15
	Plan(s)	R23	Residential	Bedroom	W31	220°	Ľ		2.78		44	16							
								1.0		2.78			44	16	Yes	-	Yes	-19	-11



Proper	rty, room	& windo	ow attributes					Day	light (B	RE)	:	Sunligh	t (BRE	)	Al	DF		APSH	
		Poom			V	/indow			ADF		AP. wind		APSH	room	Satisfie	Short-	Satisfie	Sho	
Floor	Flat no.	Room ref.	Property type	Room use	Ref. &	Orientat	ion	Targe t	ADF win	ADF	Annu al	vvinte r	Annua I	Winte r	s BRE?	fall (ADF%)	s BRE?	Annua I	winte r
	Plan(s)	R24	Residential	LKD	W32	220°	Ľ	(%)	1.43	(%)	35	20	(%)	(%)				(%)	(%)
	(-)							2.0		1.43			35	20	No	0.57	Yes	-10	-15
Fourth	Plan(s)	R1	Residential	Bedroom	W1	220°	Ľ		1.48		20	13							
								1.0		1.48			20	13	Yes	-	Win only	5	-8
	Plan(s)	R2	Residential	Living Room	W2	220°	Ľ	1.5	2.04	2.04	25	10	25	10	Yes	_	Yes	0	-
	Plan(s)	R3	Residential	KD	W3	175°	<b>V</b>	1.5	1.09	2.04	14	5	25	10	162	-	165	U	-5
	(-)						Ť	2.0		1.09			14	5	No	0.91	Win only	11	0
	Plan(s)	R4	Residential	Bedroom	W4	175°	$\downarrow$		0.50		2	0							
								1.0		0.50			2	0	No	0.50	No	23	5
	Plan(s)	R5	Residential	Bedroom	W5	130°	7	1.0	1.03	1.03	13	1	13	1	Yes	-	No	12	4
	Plan(s)	R6	Residential	KD	W6	130°	N	1.0	1.21	1.00	19	2	10		103		140	12	7
	` '							2.0		1.21			19	2	No	0.79	No	6	3
	Plan(s)	R7	Residential	Living Room	W7	130°	7		1.40		22	2							
					W8	40°N	7		1.04		0	0							
	Plan(s)	R8	Residential	Redroom	W9	40°N	71	1.5	0.73	2.44	0	0	22	2	Yes	-	No	3	3
	i iaii(s)	NO	Nesideriliai	Dearoom	VVS	40 14	/-	1.0	0.73	0.73	U		0	0	No	0.27	No	25	5
	Plan(s)	R9	Residential	Bedroom	W10	95°	$\rightarrow$		0.54		7	2							
					W11	40°N	7		1.86		3	0							
								1.0		2.41			8	2	Yes	-	No	17	3
	Plan(s)	R10	Residential	Bedroom	W12	40°N	7	4.0	1.92	4.00	3	0	0	0	V		Ma	00	_
	Plan(s)	R11	Residential	Redroom	W13	40°N	71	1.0	0.99	1.92	1	0	3	0	Yes	-	No	22	5
	i idii(o)		rtoolacritiai	Boardonn	*****	40 14	,	1.0	0.00	0.99	,		1	0	No	0.01	No	24	5
	Plan(s)	R12	Residential	LKD	W14	95°	$\rightarrow$		0.39		7	0							
					W15	40°N	7		1.02		4	0							
	DI ()	D.10	5		11/40		_	2.0		1.40			7	0	No	0.60	No	18	5
	Plan(s)	R13	Residential	Bedroom	W16	40°N	7	1.0	1.43	1.43	3	0	3	0	Yes	-	No	22	5
	Plan(s)	R14	Residential	Bedroom	W17	40°N	7	1.0	1.16	1.40	1	0	3		103		140		
	,							1.0		1.16			1	0	Yes		No	24	5
	Plan(s)	R15	Residential	LKD	W18	95°	$\rightarrow$		0.34		6	0							
					W19	40°N	7		0.98		2	0	_	_					_
	Plan(s)	R16	Residential	Redroom	W20	40°N	7	2.0	1.63	1.32	2	0	6	0	No	0.68	No	19	5
	i iaii(s)	KIO	Nesideriliai	Dearoom	W21	345°N	<b>1</b>		0.55		0	0							
								1.0		2.18			2	0	Yes	-	No	23	5
	Plan(s)	R17	Residential	Bedroom	W22	40°N	7		0.99		1	0							
								1.0		0.99			1	0	No	0.01	No	24	5
	Plan(s)	R18	Residential	LKD	W23 W24	40°N 310°N	7		0.52 1.60		2 10	0							
					W25	310 N	K		1.48		10	0							
					_			2.0	_	3.60			12	0	Yes	-	No	13	5
	Plan(s)	R19	Residential	Bedroom	W26	310°N	K		2.49		10	0							
	Dis : ( )	Doo	Decide the	Dad	14/07	2050		1.0	0.40	2.49	0.4	0	10	0	Yes	-	No	15	5
	Plan(s)	R20	Residential	Bedroom	W27	265°	<b>←</b>	1.0	2.46	2.46	31	8	31	8	Yes	-	Yes	-6	-3
	Plan(s)	R21	Residential	LKD	W28	265°	<b>←</b>	1.0	0.80	2.40	26	5	01	J	162		165	-0	-5
	(-/				W29	220°	Ľ		1.85		37	20							
								2.0		2.65			43	20	Yes	-	Yes	-18	-15
	Plan(s)	R22	Residential	Bedroom	W30	220°	Ľ		2.17	۰	46	20		0.5					
	Plan(s)	R23	Residential	Redroom	W31	220°	Ľ	1.0	2.85	2.17	44	16	46	20	Yes	-	Yes	-21	-15
	i iaii(S)	1123	residetilial	Dealooili	1614	220	2	1.0	2.05	2.85	-1-1	70	44	16	Yes	-	Yes	-19	-11
	Plan(s)	R24	Residential	LKD	W32	220°	Ľ		1.49		36	21							
								2.0		1.49			36	21	No	0.51	Yes	-11	-16
Fifth	Plan(s)	R1	Residential	Bedroom	W1	220°	Ľ		1.55	, -	20	13					147		
	Plan(s)	R2	Recidential	Living Room	W2	220°	Ľ	1.0	2.21	1.55	30	15	20	13	Yes	-	Win only	5	-8
	i iaii(S)	NΖ	residefillal	LIVING ROOM	v v Z	220	Ľ	1.5	2.21	2.21	30	10	30	15	Yes	-	Yes	-5	-10
								5							. 30		. 55		



Part   Part	Proper	rty, room	& wind	ow attributes					Day	light (B	RE)	9	Sunligh	t (BRE	)	ΙA	OF .		APSH	
Pluncy   R   R   Recolaries   R   R   Recolaries   R   R   R   R   R   R   R   R   R		-				٧	Vindow			ADF		AP	оп -	A D S H	room	Satisfie	Short-	Satisfie	Sho	rtfall
Parcy   Parc	Floor	Flat no.		Property type	Room use	Ref. &	Orientat	ion					"VVInte r	Annua I	Winte r				Annua I	
Planck   Planck   Residential Bedroom   We   170		Plan(s)	ВЗ	Residential	KD				(%)	(%)	(%)	(%)	(%)	(%)	(%)	DIXL:	(ADI 70)	DILL:	(%)	
Planck   P		1 1011(3)	11.0	residential	ND	****	1/3	•	2.0	1.20	1.25	13		19	8	No	0.75	Win only	6	-3
Planck   R		Plan(s)	R4	Residential	Bedroom	W4	175°	<b>V</b>		0.58		4	1							
Panic   Pani									1.0		0.58			4	1	No	0.42	No	21	4
Plant   Plan		Plan(s)	R5	Residential	Bedroom	W5	130°	7		1.06		13	1	4.0	,					
Plant   Plan		Plan(e)	P6	Pasidential	KD	We	130°	N.	1.0	1 2/	1.06	10	2	13	1	Yes	-	No	12	4
Plan(s)   R7   Residential Living Booth   W7   1327   W7   1.64   22   2   2   0   0   0   0   0   0		i iaii(s)	NO	Residential	ND	VVO	130	_	2.0	1.24	1.24	19	2	19	2	No	0.76	No	6	3
Planck   R8   Residential Bedroom   W19   A9   A9   A9   A9   A9   A9   A9		Plan(s)	R7	Residential	Living Room	W7	130°	Ŋ		1.45		22	2							
Plant(s)   R8   Residential Bedroom   W9   W7   Z7   0.73   0.0						W8	40°N	7		1.04		0	0							
Plane    P									1.5		2.49			22	2	Yes	-	No	3	3
Plane   Plan		Plan(s)	R8	Residential	Bedroom	W9	40°N	7	1.0	0.73	0.72	0	0	0	0	No	0.27	No	25	5
Plan(s)   R10   Residential   Bedroom   W12   407N   2   1,90   2.45   1,90   3   0   1   1   1   1   1   1   1   1   1		Plan(s)	R9	Residential	Bedroom	W10	95°	<b>→</b>	1.0	0.56	0.73	7	2	0	0	INU	0.21	INU	25	3
Plan(s)   R10   Residential   Bedroom   W12   40"N   7   1.06   1.96   3   0   0   Ves   No   22   5   5		(-)																		
Plan(s)   R11   Residential Bedroom   W13   40"N   2"   0.99   1 0 0   0   0   0   0   0   0   0   0									1.0		2.45			8	2	Yes	-	No	17	3
Plan(s)   R11   Residential   Bedroom   W13   40°N   7   0,099   1   0   0   0   0   0   0   0   0   0		Plan(s)	R10	Residential	Bedroom	W12	40°N	7		1.96		3	0							
Plan(s)   R12   Residential   Red   Red   Residential   Red   Residential   Red   Residential   Red   Residential   Red   Residential   Red   Residential   Red   Red   Residential   Red   Residential   Red   Residential   Red   Red   Residential   Red   Residential   Red   Residential   Red   Residential   Red   Residential   Red   Residential   Red   Red   Residential   Red   Residential   Red   Residential   Red   Red   Residential   Red   Residential   Red   Residential   Red		Dis : ( )	D4:	Davids in	Dado	14/40	4001		1.0	0.00	1.96			3	0	Yes	-	No	22	5
Plan(s)   R12   Residential   LKD   W14   95"   S   C   C   C   C   C   C   C   C   C		Plan(s)	K11	Residential	Bedroom	W13	40°N	71	1.0	0.99	0.00	1	0	1	0	No	0.01	No	24	5
Plan(s)   R14   Residential   Bedroom   W16   A0"N   A   1.04   A   0   0   0   No   0.57   No   18   5		Plan(s)	R12	Residential	LKD	W14	95°	<b>→</b>	1.0	0.39	0.33	7	0	'		140	0.01	140	24	3
Plan(s) R13		, ,				W15	40°N						0							
Plan(s)   R14   Residential   Bedroom   W17   40°N   78   1.03   1   0   0   Ves   - No   22   5									2.0		1.43			7	0	No	0.57	No	18	5
Plan(s)		Plan(s)	R13	Residential	Bedroom	W16	40°N	7		1.45		3	0							
Plan(s) R15		Diam(a)	D44	Desidential	Dadassa	10/47	40981	-	1.0	4.00	1.45	4	0	3	0	Yes	-	No	22	5
Plan(s)		Plan(s)	K14	Residential	Bearoom	VV 17	40°N	/	1.0	1.03	1.03	7	U	1	0	Yes	_	No	24	5
Plan(s)   R16   Residential   Bedroom   W20   40°N   74   0.051   0   0   0   0   0   0   0   0   0		Plan(s)	R15	Residential	LKD	W18	95°	$\rightarrow$	1.0	0.31	1.00	5	0			100		110		
Plan(s)   R16   Residential   Bedroom   W20   40"N   7						W19	40°N	7		0.99		3	0							
Plan(s)									2.0		1.31			6	0	No	0.69	No	19	5
Plan(s)   R17   Residential   Bedroom   W22   40°N   7   0.88   1   0   0   0   0   0   0   0   0   0		Plan(s)	R16	Residential	Bedroom								ł							
Plan(s)   R17   Residential   Bedroom   W22   40°N   7   0.88   1   0   No   0.12   No   24   5						W21	345°N	个	1.0	0.51	2 16	0	0	2	0	Voc		No	23	5
Plan(s)   R18   Residential   LKD   W23   40°N   7   0.47   2   0   0   0   0   0   0   0   0   0		Plan(s)	R17	Residential	Bedroom	W22	40°N	7	1.0	0.88	2.10	1	0			163		140	23	3
W24   310°N   R   1.61   10   0   0   0   0   0   0   0   0		(-)							1.0		0.88			1	0	No	0.12	No	24	5
March   Marc		Plan(s)	R18	Residential	LKD	W23	40°N	7		0.47		2	0							
Plan(s) R19													l							
Plan(s)   R19   Residential   Bedroom   W26   310°N   K   2.50   10   0						W25	310°N	K	2.0	1.49	2.57	10	0	10	0	Voo		No	10	-
Plan(s)   R20   Residential   Bedroom   W27   265*   C   2.47   31   8   Wes   -   No   15   5		Plan(s)	R19	Residential	Bedroom	W26	310°N	K	2.0	2 50	3.57	10	0	12	0	168	-	INU	13	5
Plan(s) R21   Residential LKD   W28   265°   ←   0.81   26   5		i idii(o)	1110	rtoolacritiai	Douroom	***20	010 11		1.0	2.00	2.50	70		10	0	Yes	-	No	15	5
Plan(s)       R21       Residential       LKD       W28       265°       ←       0.81       26       5       Image: Control of the point of the		Plan(s)	R20	Residential	Bedroom	W27	265°	<b>←</b>		2.47		31	8							
W29   220°   W   2.77   61   24									1.0		2.47			31	8	Yes	-	Yes	-6	-3
Plan(s)   R22   Residential   Bedroom   W30   220"   W   2.40   50   20   Ves   - Ves   -37   -19		Plan(s)	R21	Residential	LKD								ł							
Plan(s)       R22       Residential       Bedroom       W30       220°       ✓       2.40       50       20       Yes       -       Yes       -25       -15         Plan(s)       R23       Residential       Bedroom       W31       220°       ✓       3.19       50       20       Yes       -       Yes       -25       -15         Plan(s)       R24       Residential       LKD       W32       220°       ✓       2.29       61       24       Yes       -       Yes       -25       -15         Sixth       Plan(s)       R1       Residential       Bedroom       W1       220°       ✓       1.63       23       16       Yes       -       Yes       -36       -19         Sixth       Plan(s)       R2       Residential       Living Room       W2       220°       ✓       2.40       34       19       Yes       -       Yes       -9       -14         Plan(s)       R3       Residential       KD       W3       175°       ✓       1.44       22       11       No       0.56       Win only       3       -6         Plan(s)       R4       Residential       Bedroom						w29	220°	Ľ	2.0	2.77	3.58	61	24	62	24	Yas		Yes	-37	-10
Plan(s) R23   Residential   Bedroom   W31   220°   W   3.19   50   20   Yes   - Yes   -25   -15		Plan(s)	R22	Residential	Bedroom	W30	220°	ĸ	2.0	2.40	3.30	50	20	02		103		103	01	13
Plan(s) R24   Residential LKD   W32   220°   \( \nu \)   2.29   61   24		. ,							1.0		2.40			50	20	Yes	-	Yes	-25	-15
Plan(s) R24 Residential LKD W32 220°		Plan(s)	R23	Residential	Bedroom	W31	220°	Ľ		3.19		50	20							
Sixth Plan(s) R1 Residential Bedroom   W1   220°   W   1.63   23   16									1.0		3.19			50	20	Yes	-	Yes	-25	-15
Sixth Plan(s) R1 Residential Bedroom W1 220°		Plan(s)	R24	Residential	LKD	W32	220°	Ľ	2.0	2.29	2 20	61	24	61	24	Voc		Voc	-36	-10
Plan(s) R2 Residential Living Room   W2   220°   W   2.40   34   19     Yes   -   Win only   2   -11	Sixth	Plan(s)	R1	Residential	Bedroom	W1	220°	K	2.0	1.63	2.29	23	16	01	24	168	_	168	-30	-19
1.5   2.40   34   19   Yes   -   Yes   -9   -14		(0)							1.0		1.63			23	16	Yes	-	Win only	2	-11
Plan(s)       R3       Residential       KD       W3       175°       ↓       1.44       22       11       No       0.56       Win only       3       -6         Plan(s)       R4       Residential       Bedroom       W4       175°       ↓       0.67       6       3       No       0.33       No       19       2         Plan(s)       R5       Residential       Bedroom       W5       130°       ¥       1.10       13       1		Plan(s)	R2	Residential	Living Room	W2	220°	ĸ		2.40		34	19							
2.0 1.44 22 11 No 0.56 Win only 3 -6 Plan(s) R4 Residential Bedroom W4 175° ↓ 0.67 6 3  1.0 0.67 6 3 No 0.33 No 19 2 Plan(s) R5 Residential Bedroom W5 130° № 1.10 13 1									1.5		2.40			34	19	Yes	-	Yes	-9	-14
Plan(s)       R4       Residential       Bedroom       W4       175°       ↓       0.67       6       3       No       0.33       No       19       2         Plan(s)       R5       Residential       Bedroom       W5       130°       ¥       1.10       13       1		Plan(s)	R3	Residential	KD	W3	175°	<b>1</b>	2.0	1.44	4.44	22	11	00	1.4	NI -	0.50	M/im a d	2	
1.0   0.67   6   3   No   0.33   No   19   2		Plan(s)	R4	Residential	Bedroom	W4	175°	J.	2.0	0.67	1.44	6	.3	22	17	NO	0.56	vvin only	3	-6
Plan(s) R5 Residential Bedroom W5 130° 🔰 1.10 13 1		(0)					_,,	_	1.0	,	0.67			6	3	No	0.33	No	19	2
1.0 1.10 13 1 Yes - No 12 4		Plan(s)	R5	Residential	Bedroom	W5	130°	И		1.10		13	1							
									1.0		1.10			13	1	Yes	-	No	12	4



Proper	tv. room	& windo	w attributes					Dav	rlight (B	RE)		Sunliat	nt (BRE	)	Al	DF		APSH	
	<b>J</b> ,				٧	Vindow			ADF		AP	ЗΠ		room		Short-	Satisfie		rtfall
Floor	Flat no.	Room ref.	Property type	Room use	Ref. &	Orienta	tion	Targe t	ADF win	ADF	Annu" al	dow Winte r	Annua I	Winte r	s	fall (ADF%)	s BRE?	Annua I	winte r
	Plan(s)	R6	Residential	KD	W6	130°	7	(%)	(%) 1.29	(%)	(%) 19	2	(%)	(%)	BKE!	(ADI 70)	DKE!	(%)	(%)
	riali(5)	NO	Residerillar	ND	VVO	150	24	2.0	1.29	1.29	19		19	2	No	0.71	No	6	3
	Plan(s)	R7	Residential	Living Room	W7	130°	7	2.0	1.51	20	25	3		_		0		Ü	
					W8	40°N	7		1.04		0	0							
								1.5		2.56			25	3	Yes	-	Ann only	0	2
	Plan(s)	R8	Residential	Bedroom	W9	40°N	7		0.73		0	0							
	DI ()	<b>D</b> 0	5		14/40			1.0		0.73	-		0	0	No	0.27	No	25	5
	Plan(s)	R9	Residential	Bedroom	W10 W11	95° 40°N	<b>→</b>		0.57 1.93		7	2							
					VV 1 1	40 14	,	1.0	1.33	2.50	3		8	2	Yes	_	No	17	3
	Plan(s)	R10	Residential	Bedroom	W12	40°N	7		2.00		3	0							
								1.0		2.00			3	0	Yes	-	No	22	5
	Plan(s)	R11	Residential	Bedroom	W13	40°N	7		0.99		1	0							
	51 ()	D.10	5		10111			1.0		0.99	_		1	0	No	0.01	No	24	5
	Plan(s)	R12	Residential	LKD	W14 W15	95° 40°N	<b>→</b>		0.40 1.06		7 4	0							
					WIS	40 N	/1	2.0	1.00	1.46	4		7	0	No	0.54	No	18	5
Sevent	Plan(s)	R1	Residential	Bedroom	W1	220°	ĸ		1.69		23	16							
								1.0		1.69			23	16	Yes	-	Win only	2	-11
	Plan(s)	R2	Residential	Living Room	W2	220°	Ľ		2.54		36	21							
								1.5		2.54			36	21	Yes	-	Yes	-11	-16
	Plan(s)	R3	Residential	KD	W3	175°	<b>1</b>	2.0	1.62	1.62	24	13	24	40	No*	0.20	Win only	4	
	Plan(s)	R4	Residential	Bedroom	W4	175°	<b>\</b>	2.0	0.76	1.02	7	4	24	13	No*	0.38	Win only	1	-8
	r idii(o)	14.1	rtoolaorillar	Boaroom	•••	1,0	•	1.0	0.70	0.76	,	,	7	4	No	0.24	No	18	1
	Plan(s)	R5	Residential	Bedroom	W5	130°	7		1.18		14	1							Ì
								1.0		1.18			14	1	Yes	-	No	11	4
	Plan(s)	R6	Residential	KD	W6	130°	7		1.36		23	2							ļ
	Diam(a)	DZ	Danislastial	Listen Been	14/7	4200		2.0	4.00	1.36	20		23	2	No	0.64	No	2	3
	Plan(s)	R7	Residential	Living Room	W7 W8	130° 40°N	7		1.60 1.05		28 0	3 0							
					VVO	40 14	,	1.5	1.00	2.65	U		28	3	Yes	-	Ann only	-3	2
	Plan(s)	R8	Residential	Bedroom	W9	40°N	7		0.73		0	0							
								1.0		0.73			0	0	No	0.27	No	25	5
	Plan(s)	R9	Residential	Bedroom	W10	95°	$\rightarrow$		0.58		7	2							
					W11	40°N	71	1.0	1.97	2.55	3	0	0	2	Voc		No	17	2
	Plan(s)	R10	Residential	Bedroom	W12	40°N	7	1.0	2.03	2.55	3	0	8	2	Yes	-	No	17	3
	(0)		rtooraormar	200.00		10 11		1.0	2.00	2.03	Ü		3	0	Yes	-	No	22	5
	Plan(s)	R11	Residential	Bedroom	W13	40°N	7		0.99		1	0							
								1.0		0.99			1	0	No	0.01	No	24	5
	Plan(s)	R12	Residential	LKD	W14	95°	$\rightarrow$		0.41		7	0							
					W15	40°N	7	2.0	1.08	1.40	4	0	7		No	0 F1	No	10	
Eighth	Plan(s)	R1	Residential	Bedroom	W1	220°	Ľ	2.0	2.44	1.49	47	20	7	0	No	0.51	No	18	5
9.101	.3(0)							1.0		2.44			47	20	Yes	-	Yes	-22	-15
	Plan(s)	R2	Residential	Living Room	W2	220°	ĸ		3.76		57	21							
								1.5		3.76			57	21	Yes	-	Yes	-32	-16
	Plan(s)	R3	Residential	KD	W3	175°	<b>\P</b>		1.74	, -	27	13							
	Dlan(a)	D4	Decidential	Redroom	\A/A	175°		2.0	0.87	1.74	10	1	27	13	No*	0.26	Yes	-2	-8
	Plan(s)	R4	Residential	Bedroom	W4	1/5*	1	1.0	0.87	0.87	10	4	10	4	No	0.13	No	15	1
	Plan(s)	R5	Residential	Bedroom	W5	130°	N		1.32	3.37	20	1	15		140	3.10	110	.5	
	. ,							1.0		1.32			20	1	Yes	-	No	5	4
	Plan(s)	R6	Residential	KD	W6	130°	7		1.50		28	2							
								2.0		1.50			28	2	No*	0.50	Ann only	-3	3
	Plan(s)	R7	Residential	Living Room	W7	130°	7		1.73		33	3							
					W8	40°N	7	1.5	0.94	2.67	0	0	33	3	Yes	-	Ann only	-8	2
	Plan(s)	R8	Residential	Bedroom	W9	40°N	7	5	0.65	,	0	0			. 55		Jiny		
								1.0		0.65			0	0	No	0.35	No	25	5
	Plan(s)	R9	Residential	Bedroom	W10	95°	$\rightarrow$		0.52		3	1							



Prope	rty, room	& wind	ow attributes					Day	light (B	RE)			nt (BRE	_	Al	DF	4	APSH	
П	FI-:	Room	December	Danie	V	Vindow		Large	ADF		win	оп dow		l room	Satisfie		Satisfie		rtfall
Floor	Flat no.	ref.	Property type	Room use	Ref. &	Orienta	tion	Targe t	win	ADF	Annu al	r	Annua I	r	s BRE?	fall (ADF%)	s BRE?	Annua I	r
					W11	40°N	7	(%)	2.01	(%)	3	(%)	(%)	(%)		` '		(%)	(%)
					****	40 14	,.	1.0	2.01	2.53	0		6	1	Yes	_	No	19	4
	Plan(s)	R10	Residential	Bedroom	W12	40°N	7		2.08		3	0							
	. ,							1.0		2.08			3	0	Yes	-	No	22	5
	Plan(s)	R11	Residential	Bedroom	W13	40°N	71		0.88		1	0							
								1.0		0.88			1	0	No	0.12	No	24	5
	Plan(s)	R12	Residential	LKD	W14	95°	$\rightarrow$		0.37		6	0							
					W15	40°N	7		1.10		4	0							
								2.0		1.47			7	0	No	0.53	No	18	5
	B Propos		Desidential	Destruction	10/4	2.450			4.07		0	0							
rounc	Plan(s)	R1	Residential	Bedroom	W1	246°	Ľ	1.0	1.27	1.27	6	0	6	0	Yes	_	No	19	5
	Plan(s)	R2	Residential	LKD	W2	246°	K	1.0	0.64	1.27	7	4	0	0	165	-	INU	19	3
	1 1011(3)	112	residential	LIND	W3	156°	7		0.31		5	4							
					W4	211°	ĸ		0.38		14	5							
					W5	156°	N		0.94		26	4							
								2.0		2.26			34	8	Yes	-	Yes	-9	-3
	Plan(s)	R3	Residential	Bedroom	W6	156°	7		0.60		3	2							
								1.0		0.60			3	2	No	0.40	No	22	3
	Plan(s)	R4	Residential	LKD	W7	211°	Ľ		0.38		15	6							
					W8	156°	7		0.90		23	3							
								2.0		1.27			27	6	No	0.73	Yes	-2	-1
First	Plan(s)	R1	Residential	Bedroom	W1	336°N	K		1.27		3	0							
	/ >							1.0		1.27			3	0	Yes	-	No	22	5
	Plan(s)	R2	Residential	Bedroom	W2	336°N	K		1.50	4 = 0	3	0			.,				_
	Diam(a)	Do	Desidential	LKD	14/0	22.681	-	1.0	0.40	1.50			3	0	Yes	-	No	22	5
	Plan(s)	R3	Residential	LKD	W3 W4	336°N 291°N	K		0.48 1.34		1	2							
					VV 4	291 N	_	2.0	1.34	1.81	15	2	15	2	No*	0.19	No	10	3
	Plan(s)	R4	Residential	Redroom	W5	291°N	<b>←</b>	2.0	1.11	1.01	12	0	13		140	0.13	NO	10	3
	1 1011(3)	11.4	residential	Dearoom	W6	246°	· Ľ		0.69		6	0							
								1.0		1.80			12	0	Yes	-	No	13	5
	Plan(s)	R5	Residential	Bedroom	W7	246°	ĸ		1.39		10	3							
								1.0		1.39			10	3	Yes	-	No	15	2
	Plan(s)	R6	Residential	LKD	W8	246°	Ľ		0.65		7	4							
					W9	156°	7		0.24		2	2							
					W10	211°	Ľ		0.24		9	8							
					W11	156°	7		0.90		33	8							
								2.0		2.02			37	9	Yes	-	Yes	-12	-4
	Plan(s)	R7	Residential	Bedroom	W12	156°	7		0.42		2	2		_					
	Dis.()	D.C.	Deside the	LIZE	14/40	2		1.0	0.01	0.42	40	10	2	2	No	0.58	No	23	3
	Plan(s)	R8	Residential	LKD	W13	211°	K.		0.34		13	10							
					W14	156°	7	2.0	0.86	1.10	30	7	22	10	No	0.94	Voo	0	E
	Plan(s)	R9	Residential	Redroom	W15	156°	7	2.0	0.30	1.19	1	1	33	10	No	0.81	Yes	-8	-5
	i iaii(S)	K9	residential	Dedibolli	0110	130	-34	1.0	0.30	0.30	1	1	1	1	No	0.70	No	24	4
	Plan(s)	R10	Residential	LKD	W16	211°	ĸ	1.5	0.32	5.50	12	9	<u> </u>		140	3.70	110		7
	(0)				W17	156°	7		0.79		24	6							
								2.0	•	1.11			27	9	No	0.89	Yes	-2	-4
	Plan(s)	R11	Residential	Bedroom	W18	156°	И		0.20		0	0							
								1.0		0.20			0	0	No	0.80	No	25	5
	Plan(s)	R12	Residential	LKD	W19	211°	ĸ		0.31		10	7							
					W20	156°	7		0.73		19	3							
								2.0		1.04			23	7	No	0.96	Win only	2	-2
	Plan(s)	R13	Residential	LKD	W21	156°	7		0.70		18	3							
					W22	101°	$\rightarrow$		0.19		5	0							
					W23	156°	7		0.24		3	0							
					W24	66°N	7		1.08		14	0							
	DI ()	<b>D</b> 4 1	D. II	D	1415 =			2.0	<u> </u>	2.21			31	3	Yes	-	Ann only	-6	2
	Plan(s)	R14	Residential	Bedroom	W25	66°N	7	, -	2.19	6 : -	18	2			.,			_	
								1.0		2.19			18	2	Yes	-	No	7	3



Proper	rty, room	& wind	ow attributes					Day	/light (B	RE)	:	Sunligh	nt (BRE	)	Α	DF		APSH	
	<b>,</b>				٧	/indow		,	ADF	,	AP	ЗΠ	APSH	l room	Satisfie	Short-	Satisfie	Sho	rtfall
Floor	Flat no.	Room ref.	Property type	Room use		Orientat	ion	Targe t	ADF win	ADF	Annu al	dow Winte r	Annua	Winte r	s	fall	s	Annua I	
	DI ()	D.1.	5					(%)	(%)	(%)	(%)	(%)	(%)	(%)	BRE?	(ADF%)	BRE?	(%)	(%)
	Plan(s)	R15	Residential	Bedroom	W26 W27	66°N	7		1.04		11	0							
					VVZI	21°N	1	1.0	0.90	1.94	0	0	11	0	Yes	_	No	14	5
	Plan(s)	R16	Residential	LKD	W28	21°N	1	1.0	1.09	1.04	4	0			103		140	1.7	J
	α(ο)	0	rtoolaonilai	2.10	W29	336°N			0.31		0	0							
								2.0		1.40			4	0	No	0.60	No	21	5
	Plan(s)	R17	Residential	Bedroom	W30	336°N	⋉		1.08		1	0							
								1.0		1.08		Ì	1	0	Yes	-	No	24	5
	Plan(s)	R18	Residential	Bedroom	W31	336°N			0.94		2	0							
								1.0		0.94			2	0	No	0.06	No	23	5
Second	Plan(s)	R1	Residential	Bedroom	W1	336°N	K		1.33		3	0							
	DI ()	-	5		1440			1.0	. =0	1.33		_	3	0	Yes	-	No	22	5
	Plan(s)	R2	Residential	Bedroom	W2	336°N	K	4.0	1.58	4.50	3	0	0	0			NI.	00	-
	Plan(s)	R3	Residential	IKD	W3	336°N	K	1.0	0.50	1.58	1	0	3	0	Yes	-	No	22	5
	Flail(S)	N3	Residerillar	LND	W4	291°N	←		1.43		16	2							
					***	231 11	\	2.0	1.40	1.94	70		16	2	No*	0.06	No	9	3
	Plan(s)	R4	Residential	Bedroom	W5	291°N	<b>←</b>	2.0	1.17	1.01	12	0	10	_	140	0.00	110		
	(0)	.,,			W6	246°	ĸ		0.77		11	0							
								1.0		1.94			15	0	Yes	-	No	10	5
	Plan(s)	R5	Residential	Bedroom	W7	246°	ĸ		1.57		12	3							
								1.0		1.57			12	3	Yes	-	No	13	2
	Plan(s)	R6	Residential	LKD	W8	246°	Ľ		0.73		8	5							
					W9	156°	7		0.33		3	3							
					W10	211°	Ľ		0.28		11	10						ļ	
					W11	156°	7		1.00		37	10							
								2.0		2.34			44	14	Yes	-	Yes	-19	-9
	Plan(s)	R7	Residential	Bedroom	W12	156°	7		0.71		4	4							
	DI (-)	Do	D 'd C.d.	LICE	14/40	2440		1.0	0.00	0.71			4	4	No	0.29	No	21	1
	Plan(s)	R8	Residential	LKD	W13	211°	Ľ.		0.38		14	11							
					W14	156°	7	2.0	0.95	1.33	34	11	37	14	No	0.67	Yes	-12	-9
	Plan(s)	R9	Residential	Bedroom	W15	156°	7	2.0	0.60	1.55	3	3	37	14	140	0.07	163	-12	-9
	1 1011(0)	110	rtoolaorillar	Douroom	****	150	Ē	1.0	0.00	0.60	Ü		3	3	No	0.40	No	22	2
	Plan(s)	R10	Residential	LKD	W16	211°	ĸ		0.36		14	11							_
					W17	156°	7		0.88		29	10							
								2.0		1.24			32	13	No	0.76	Yes	-7	-8
	Plan(s)	R11	Residential	Bedroom	W18	156°	7		0.49		2	2							
								1.0		0.49			2	2	No	0.51	No	23	3
	Plan(s)	R12	Residential	LKD	W19	211°	K		0.35		14	11							
					W20	156°	7		0.81		24	8							
	<b>D</b> I			11/5	,			2.0		1.16			28	12	No	0.84	Yes	-3	-7
	Plan(s)	R13	Residential	LKD	W21	156°	7		0.77		23	7							
					W22 W23	101°	<b>→</b>		0.19		5 5	2							
					W24	156° 66°N	7		0.28 1.10		5 14	0							
					VV Z4	OU IV	71	2.0	1.10	2.34	14		38	9	Yes	-	Yes	-13	-4
	Plan(s)	R14	Residential	Bedroom	W25	66°N	7		2.24	2.07	18	2	55		100		100	, 3	,
	(0)							1.0		2.24			18	2	Yes	-	No	7	3
	Plan(s)	R15	Residential	Bedroom	W26	66°N	7		1.06		11	0							
	, ,				W27	21°N	$\uparrow$		0.92		0	0							
								1.0		1.98			11	0	Yes	-	No	14	5
	Plan(s)	R16	Residential	LKD	W28	21°N	$\uparrow$		1.10		4	0							
					W29	336°N	K		0.32		0	0							
								2.0		1.42			4	0	No	0.58	No	21	5
	Plan(s)	R17	Residential	Bedroom	W30	336°N	K		1.10		1	0							
				_				1.0		1.10			1	0	Yes	-	No	24	5
	Plan(s)	R18	Residential	Bedroom	W31	336°N	K	4.0	0.97	0.07	2	0			× 2	0.00	N.I.	00	-
Think	Dlog (s)	D4	Dooi-la-ti-1	Dodre	1014	22.001	_	1.0	1.00	0.97	2	0	2	0	No	0.03	No	23	5
inira	Plan(s)	R1	Residential	Deuroom	W1	336°N	K	1.0	1.38	1.38	3	0	3	0	Yes		No	22	5
	Plan(s)	R2	Residential	Bedroom	W2	336°N	K	1.0	1.66	1.30	3	0	3	U	169	-	INU		3
	1 1011(3)	112	Residential	Dogroom	VVZ	330 IV			7.00										



Proper	rty, room	& wind	ow attributes					Day	light (B	RE)			t (BRE		Al	)F		APSH	
_		Room		_	V	/indow			ADF		AP win	dow		room	Satisfie				rtfall
Floor	Flat no.	ref.	Property type	Room use	Ref. &	Orientat	ion	Targe t	ADF win	ADF (%)	al	Winte r	Annua I	r	s BRE?	fall (ADF%)	s BRE?	Annua I	r
								1.0	(%)	1.66	(%)	(%)	(%)	0	Yes	-	No	(%) 22	5
	Plan(s)	R3	Residential	LKD	W3	336°N	K		0.53		1	0							
					W4	291°N	<b>←</b>		1.53		18	2							
								2.0		2.07			18	2	Yes	-	No	7	3
	Plan(s)	R4	Residential	Bedroom	W5	291°N	$\leftarrow$		1.23		12	0							
					W6	246°	K		0.89		19	0							
	DI (-)	D.F.	D. Calendar	Darles	\A/ <del>7</del>	0.450		1.0	4.04	2.11	0.0	0	21	0	Yes	-	No	4	5
	Plan(s)	R5	Residential	Bearoom	W7	246°	Ľ	1.0	1.81	1.81	20	3	20	3	Yes	_	No	5	2
	Plan(s)	R6	Residential	IKD	W8	246°	Ľ	1.0	0.85	1.01	15	5	20	3	res	-	INO	5	2
	i idii(o)	110	rtoolaontiai	LIND	W9	156°	7		0.43		6	6							
					W10	211°	ĸ		0.32		12	11							
					W11	156°	7		1.09		43	16							
								2.0		2.70			54	18	Yes	-	Yes	-29	-13
	Plan(s)	R7	Residential	Bedroom	W12	156°	7		0.92		8	8							
								1.0		0.92			8	8	No	0.08	Win only	17	-3
	Plan(s)	R8	Residential	LKD	W13	211°	Ľ		0.42		18	15							
					W14	156°	7		1.05	,	40	16		40			.,		
	Diagram (a)	D0	Desident	Dadus : ::	14/45	1500		2.0	0.00	1.46	0		43	19	No	0.54	Yes	-18	-14
	Plan(s)	R9	Residential	Regroom	W15	156°	7	1.0	0.82	0.82	6	6	6	6	No	0.49	Win only	19	-1
	Plan(s)	R10	Residential	IKD	W16	211°	Ľ	1.0	0.41	0.02	17	14	0	0	INO	0.16	vviii only	19	-1
	riaii(5)	KIU	Residential	LND	W17	156°	7		0.97		32	12							
					****	130		2.0	0.07	1.37	OL.	,,_	36	16	No	0.63	Yes	-11	-11
	Plan(s)	R11	Residential	Bedroom	W18	156°	7		0.70		5	5							
								1.0		0.70			5	5	No	0.30	Win only	20	0
	Plan(s)	R12	Residential	LKD	W19	211°	ĸ		0.40		17	14							
					W20	156°	7		0.89		27	10							
								2.0		1.28			32	15	No	0.72	Yes	-7	-10
	Plan(s)	R13	Residential	LKD	W21	156°	7		0.85		25	9							
					W22	101°	$\rightarrow$		0.19		5	0							
					W23	156°	7		0.35		6	3							
					W24	66°N	71	0.0	1.12	0.54	14	0	00	40				4.4	_
	Plan(s)	R14	Residential	Podroom	W25	66°N	71	2.0	2.28	2.51	18	2	39	10	Yes	-	Yes	-14	-5
	riaii(S)	K14	Residential	Deuloom	VV25	OO IN		1.0	2.20	2.28	10		18	2	Yes	_	No	7	3
	Plan(s)	R15	Residential	Bedroom	W26	66°N	7	1.0	1.08	2.20	11	0	10		103		140	•	
	(-)				W27	21°N	1		0.94		0	0							
								1.0		2.02			11	0	Yes	-	No	14	5
	Plan(s)	R16	Residential	LKD	W28	21°N	$\uparrow$		1.12		4	0							
					W29	336°N	$\lceil \rceil$		0.33		0	0							
								2.0		1.45			4	0	No	0.55	No	21	5
	Plan(s)	R17	Residential	Bedroom	W30	336°N	K		1.14		1	0							
								1.0		1.14			1	0	Yes	-	No	24	5
	Plan(s)	R18	Residential	Bedroom	W31	336°N	K		1.01	,	2	0							_
E041	Dlon/=\	D4	Dooids-+:-!	Podroo	10/4	22.001	-	1.0	1 15	1.01	2	0	2	0	Yes	-	No	23	5
rourtn	Plan(s)	R1	Residential	Deuroom	W1	336°N	K	1.0	1.45	1.45	3	0	3	0	Yes	-	No	22	5
	Plan(s)	R2	Residential	Bedroom	W2	336°N	K	1.0	1.75	1.40	3	0	3		162		INU	22	J
	(0)	114		200100111	***	330 14	- \	1.0	,0	1.75			3	0	Yes	-	No	22	5
	Plan(s)	R3	Residential	LKD	W3	336°N	K		0.56		1	0							
	. ,				W4		<b>←</b>		1.61		20	4							
								2.0		2.17		İ	20	4	Yes	-	No	5	1
	Plan(s)	R4	Residential	Bedroom	W5	291°N	$\leftarrow$		1.27		13	0							
					W6	246°	Ľ		1.04		27	3							
								1.0		2.31			30	3	Yes	-	Ann only	-5	2
	Plan(s)	R5	Residential	Bedroom	W7	246°	Ľ		2.17		31	5							
	Dis. ( )	D.	Devide it i	LIKE	14/0	2.55		1.0	4.00	2.17	00	-	31	5	Yes	-	Yes	-6	0
	Plan(s)	R6	Residential	LKD	W8	246°	<b>V</b>		1.03		29	7							
					W9 W10	156° 211°	N N		0.51 0.36		8 13	8 12							
					W11	156°	Z Z		1.19		49	20							
											10	23							



Ref. & Orientation   Wind	ort- lall september of the september of	Annua   (-44)   -44   y   14   -23   y   15   -16	ortfall
Ref. & Orientation   Columbia	F%) BRE? - Yes - Win only 40 Yes 02 Win only 49 Yes 14 Win only	-44   -44   y   14   -23   y   15   -16   y   17	-15 6 18 5
Plan(s) R7 Residential Bedroom W12 156° № 1.00 1.09 11 11 11 Yes  Plan(s) R8 Residential LKD W13 211°	Yes Win only Win only Win only Yes Win only Win only	-44 -23 -16 -16	-15 -6 -18 -5
Plan(s)       R7       Residential       Bedroom       W12       156°       №       1.09       11       11       11       Yes         Plan(s)       R8       Residential       LKD       W13       211°       ८       0.45       19       16       16       11       11       Yes         Plan(s)       R9       Residential       LKD       W15       156°       №       0.98       10       10       No°       0         Plan(s)       R10       Residential       LKD       W16       211°       ८       0.44       19       16       10       No°       0         Plan(s)       R10       Residential       LKD       W18       156°       №       0.86       8       8       8       No°       0         Plan(s)       R11       Residential       LKD       W19       211°       ८       0.44       19       16       19       16       10       No°       0       0       0.86       8       8       8       No°       0       0       0.86       8       8       8       No°       0       0       0       0.97       31       14       0       0       0 <th>- Win only 40 Yes 02 Win only 49 Yes 14 Win only</th> <th>-23</th> <th>-18 -5 -16</th>	- Win only 40 Yes 02 Win only 49 Yes 14 Win only	-23	-18 -5 -16
Plan(s) R8 Residential LKD W13 211°	40 Yes 02 Win only 49 Yes 14 Win only	-23 yy 15 -16	-18   -5   -16
Plan(s)       R8       Residential       LKD       W13       211°	40 Yes 02 Win only 49 Yes 14 Win only	-23 yy 15 -16	-18   -5   -16
W14   156°   N   1.15   45   20	02 Win only 49 Yes 14 Win only	y 15 -16 yy 17	-5 -16
Plan(s)       R9       Residential       Bedroom       W15       156°       №       0.98       10       10       No       0         Plan(s)       R10       Residential       LKD       W16       211°       ८       0.44       19       16       16       16       10       No°       0       0       10       No°       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0        0	02 Win only 49 Yes 14 Win only	y 15 -16 yy 17	-5 -16
1.0   0.98   10   10   10   No   0	49 Yes	-16 y 17	-16
Plan(s)       R10       Residential       LKD       W16       211°	49 Yes	-16 y 17	-16
W17   156°   N   1.06   38   18     N0°   C	14 Win only	y <b>17</b>	
2.0 1.51	14 Win only	y <b>17</b>	
Plan(s)       R11       Residential       Bedroom       W18       156°       ¥       0.86       8       8       No       0         Plan(s)       R12       Residential       LKD       W19       211°       ८       0.44       19       16       17       16       17       16       17       16       17       16       17       14       17       16       17       16	14 Win only	y <b>17</b>	
1.0 0.86 8 8 No 0  Plan(s) R12 Residential LKD W19 211°			-3
Plan(s) R12 Residential LKD W19 211°			-3
W20   156°   \( \)	59 Yes	0	
2.0 1.41 34 17 No 0  Plan(s) R13 Residential LKD W21 156° № 0.92 30 13  W22 101° → 0.20 5 0  W23 156° № 0.41 9 6	59 Yes	0	
Plan(s) R13 Residential LKD W21 156° № 0.92 30 13  W22 101° → 0.20 5 0  W23 156° № 0.41 9 6			-12
W23 156° N 0.41 9 6			
W24 66°N           1.14      14     0			
2.0 2.67 44 14 Yes	- Yes	-19	-9
Plan(s) R14 Residential Bedroom W25 66°N ↗ 2.32 19 2			
1.0 2.32 19 2 Yes	- No	6	3
Plan(s) R15 Residential Bedroom W26 66°N 7 1.10 11 0			
W27 21°N ↑ 0.96 0 0			l _
1.0 2.06   11 0 Yes	- No	14	5
Plan(s) R16 Residential LKD W28 21°N ↑ 1.13 4 0 W29 336°N № 0.35 0 0			1
	51 No	21	5
Plan(s) R17 Residential Bedroom W30 336°N \ 1.20 1 0	31 140	21	3
1.0 1.20 1 0 Yes	- No	24	5
Plan(s) R18 Residential Bedroom W31 336°N N 1.06 2 0			
1.0 1.06 2 0 Yes	- No	23	5
Fifth Plan(s) R1 Residential Bedroom W1 336°N   1.54 3 0			
1.0 1.54 3 0 Yes	- No	22	5
Plan(s) R2 Residential Bedroom W2 336°N   1.86 3 0			
1.0 1.86 3 0 Yes	- No	22	5
Plan(s) R3 Residential LKD W3 336°N N 0.60 1 0			
W4 291°N ← 1.66 21 5	MC I		
2.0 2.26 21 5 Yes	- Win only	y 4	0
Plan(s) R4 Residential Bedroom W5 291°N ← 1.31 14 1   W6 246°			
1.0 2.52 35 8 Yes	- Yes	-10	-3
Plan(s) R5 Residential Bedroom W7 246° ½ 2.62 39 12			
1.0 2.62 39 12 Yes	- Yes	-14	-7
Plan(s) R6 Residential LKD W8 246°   ✓ 1.28 39 12			
W9 156° 🔰 0.58 9 9			
W10 211° v 0.41 13 12			
W11 156° \( <b>1</b> \) 1.28 50 20			
2.0 3.55 81 26 Yes	- Yes	-56	-21
Plan(s) R7 Residential Bedroom W12 156° > 1.22 12 12	140		_
1.0 1.22 12 Yes	- Win only	y 13	-7
Plan(s) R8 Residential LKD W13 211° \(\nu \) 0.48 19 16 \\ \text{W14} 156° \(\nu \) 1.23 49 20			
	29 Yes	-27	-18
Plan(s) R9 Residential Bedroom W15 156° \( \) 1.11 10 10	20 163	21	10
1.0 1.11 10 10 Yes	- Win only	y 15	-5
Plan(s) R10 Residential LKD W16 211° V 0.48 19 16			
W17 156° ¥ 1.15 41 18			
2.0 1.62 44 21 No* C	38 Yes	-19	-16
Plan(s) R11 Residential Bedroom W18 156° 🔰 0.99 8 8			
1.0 0.99 8 8 No C	01 Win only	y 17	-3



Prope	rtv. room	& wind	ow attributes					Day	/light (B	RE)		Sunligh	nt (BRE	)	Al	DF		APSH	
		_			٧	/indow			ADF	,	AP	ъπ	ADSH	Iroom		Short-	Satisfie	Sho	rtfall
Floor	Flat no.	Room ref.	Property type	Room use	Ref. &	Orientat	ion	Targe t	ADF win	ADF	Annu al	aow Winte r	Annua	Winte r	s BRE?	fall (ADF%)	s	Annua I	winte r
	Plan(s)	R12	Residential	LKD	W19	211°	L L	(%)	0.47	(%)	19	16	(%)	(%)	51121	(* *= * **)	5.12.	(%)	(%)
	Fiail(S)	N12	Residerillar	LND	W20	156°	N N		1.05		35	15							
					20	150	_	2.0	7,00	1.52	00	,,,	38	18	No*	0.48	Yes	-13	-13
	Plan(s)	R13	Residential	LKD	W21	156°	7		1.00	1102	33	14				00			
	(-)				W22	101°	$\rightarrow$		0.20		5	0							
					W23	156°	N		0.45		9	6							
					W24	66°N	71		1.16		15	0							
								2.0		2.81			47	14	Yes	-	Yes	-22	-9
	Plan(s)	R14	Residential	Bedroom	W25	66°N	7		2.36		20	2							
								1.0		2.36			20	2	Yes	-	No	5	3
	Plan(s)	R15	Residential	Bedroom	W26	66°N	7		1.11		11	0							
					W27	21°N	$\uparrow$		0.98		0	0							
								1.0		2.10			11	0	Yes	-	No	14	5
	Plan(s)	R16	Residential	LKD	W28	21°N	$\uparrow$		1.14		4	0							
					W29	336°N	K		0.39		0	0							
								2.0		1.52			4	0	No*	0.48	No	21	5
	Plan(s)	R17	Residential	Bedroom	W30	336°N	K		1.30		1	0							
								1.0		1.30			1	0	Yes	-	No	24	5
	Plan(s)	R18	Residential	Bedroom	W31	336°N	K		1.14		2	0							
								1.0		1.14			2	0	Yes	-	No	23	5
Sixth	Plan(s)	R1	Residential	Bedroom	W1	336°N	K		1.67		3	0							
								1.0		1.67			3	0	Yes	-	No	22	5
	Plan(s)	R2	Residential	Bedroom	W2	336°N	K		2.00		3	0							
								1.0		2.00		_	3	0	Yes	-	No	22	5
	Plan(s)	R3	Residential	LKD	W3	336°N	Γ.		0.64		1	0							
					W4	291°N	<b>←</b>		2.51		25	5						_	_
	Dis. (a)	D.4	Desidential	D	14/5	204011		2.0	4.05	3.14	4.4		25	5	Yes	-	Yes	0	0
	Plan(s)	R4	Residential	Bedroom	W5	291°N	<b>←</b>		1.35		14	1							
					W6	246°	Ľ	4.0	1.25	0.00	34	9	200	0	Vas		Vaa	44	
	Dlan(a)	D.E	Residential	Dodroom	10/7	246°	Ľ	1.0	2.75	2.60	11	1.1	36	9	Yes	-	Yes	-11	-4
	Plan(s)	R5	Residential	Dealooni	W7	240	Ľ	1.0	2.75	2.75	41	14	41	14	Yes	_	Yes	-16	-9
	Plan(a)	R6	Residential	LKD	W8	246°	Ľ	1.0	1.36	2.73	41	14	41	14	165	-	162	-10	-9
	Plan(s)	NO	Residerillar	LND	W9	156°	7		0.53		6	6							
					W10	211°	L L		0.38		11	11							
					W11	156°	7		1.33		54	21							
						150	_	2.0	7,00	3.60	0.		86	28	Yes		Yes	-61	-23
	Plan(s)	R7	Residential	Bedroom	W12	156°	7		1.13		9	9						-	
	(-)							1.0		1.13			9	9	Yes	-	Win only	16	-4
	Plan(s)	R8	Residential	LKD	W13	211°	ĸ		0.45		17	15							
	(-)				W14	156°	N		1.29		49	20							
								2.0		1.74			51	22	No*	0.26	Yes	-26	-17
	Plan(s)	R9	Residential	Bedroom	W15	156°	7		1.18		10	10							
								1.0		1.18			10	10	Yes	-	Win only	15	-5
	Plan(s)	R10	Residential	LKD	W16	211°	ĸ		0.49		19	16							
					W17	156°	7		1.21		45	18							
								2.0		1.70			48	21	No*	0.30	Yes	-23	-16
	Plan(s)	R11	Residential	Bedroom	W18	156°	7		1.06		8	8							
								1.0		1.06			8	8	Yes	-	Win only	17	-3
	Plan(s)	R12	Residential	LKD	W19	211°	Ľ		0.49		19	16							
					W20	156°	7		1.12		38	15							
								2.0		1.61			41	18	No*	0.39	Yes	-16	-13
	Plan(s)	R13	Residential	LKD	W21	156°	7		1.06		37	14							
					W22	101°	$\rightarrow$		0.20		5	0							
					W23	156°	7		0.48		9	6							
					W24	66°N	7		1.18		17	0							
								2.0		2.93			51	14	Yes	-	Yes	-26	-9
	Plan(s)	R14	Residential	Bedroom	W25	66°N	7		2.41		20	2							
								1.0		2.41			20	2	Yes	-	No	5	3
	Plan(s)	R15	Residential	Bedroom	W26	66°N	7		1.13		11	0							
					W27	21°N	1		1.00		0	0							
								1.0		2.14			11	0	Yes	-	No	14	5



Proper	rty, room	& wind	low attributes					Day	light (B	RE)			t (BRE	)	Al	DF		APSH	
Floor	Flot no	Room	Dranarty type	Boom was	٧	/indow		Targe	ADF		AP Win Annii	on dow vvinte		room		Short-	Satisfie	Sho Annua	
FIOOR	Flat no.	ref.	Property type	Room use	Ref. &	Orientat	ion	t	win	ADF (%)	al	r	- 1	r	s BRE?	fall (ADF%)	s BRE?	/(%)	r
	Plan(s)	R16	Residential	LKD	W28	21°N	$\uparrow$	(%)	1.15	` '	4	0	(%)	(%)				(%)	(0/2)
					W29	336°N	⋉		0.44		0	0							
								2.0		1.59			4	0	No*	0.41	No	21	5
	Plan(s)	R17	Residential	Bedroom	W30	336°N	K	4.0	1.46	4.40	1	0	4				NI.	0.4	-
	Plan(s)	R18	Residential	Redroom	W31	336°N	K	1.0	1.29	1.46	2	0	1	0	Yes	-	No	24	5
	i idii(3)	1110	residential	Beardonn	WOI	330 14		1.0	1.20	1.29	2		2	0	Yes	-	No	23	5
Sevent	Plan(s)	R1	Residential	Bedroom	W1	246°	Ľ		1.39		34	9							
					W2	156°	Ŋ		1.23		10	10							
								1.0		2.62			44	19	Yes	-	Yes	-19	-14
	Plan(s)	R2	Residential	LKD	W3	211°	Ľ		0.51		20	17							
					W4	156°	7	2.0	1.25	1.75	48	18	52	22	No*	0.25	Yes	-27	-17
	Plan(s)	R3	Residential	Redroom	W5	156°	K	2.0	1.07	1.75	8	8	52	22	INO	0.25	res	-21	-17
	i idii(o)	110	rtoolaomiai	Bouloom	****	150		1.0	1.01	1.07			8	8	Yes	-	Win only	17	-3
	Plan(s)	R4	Residential	LKD	W6	211°	Ľ		0.49		19	16							
					W7	156°	7		1.16		42	15							
								2.0		1.65			45	18	No*	0.35	Yes	-20	-13
	Plan(s)	R5	Residential	LKD	W8	156°	7		1.11		41	14							
					W9	101°	→ 		0.21		6 9	0							
					W10 W11	156° 66°N	7		0.48 1.20		9 18	6							
					****	00 14	,	2.0	1.20	3.00	10		54	14	Yes	-	Yes	-29	-9
	Plan(s)	R6	Residential	Bedroom	W12	66°N	7		2.45		21	2							
								1.0		2.45			21	2	Yes	-	No	4	3
	Plan(s)	R7	Residential	Bedroom	W13	66°N	7		1.15		11	0							
					W14	21°N	$\uparrow$		1.03		0	0							
	DI (-)	Do	Desire of a	LICE	14/45	24981	^	1.0	4 47	2.17	,		11	0	Yes	-	No	14	5
	Plan(s)	R8	Residential	LKD	W15 W16	21°N 336°N	↑ <u></u>		1.17 0.52		<i>4</i> 0	0							
					VV 10	330 N	- ' \	2.0	0.02	1.68	U		4	0	No*	0.32	No	21	5
	Plan(s)	R9	Residential	Bedroom	W17	336°N	K		1.71		1	0							
								1.0		1.71			1	0	Yes	-	No	24	5
	Plan(s)	R10	Residential	Bedroom	W18	336°N	⋉		1.52		2	0							
								1.0		1.52			2	0	Yes	-	No	23	5
Eighth	Plan(s)	R1	Residential	Bedroom	W1	246°	K.		1.50 1.25		34	9							
					W2	156°	7	1.0	1.25	2.75	10	10	44	19	Yes	_	Yes	-19	-14
	Plan(s)	R2	Residential	LKD	W3	211°	ĸ	1.0	0.51	2.70	20	17	77	13	103		103	13	14
	. ,				W4	156°	7		1.28		50	18							
								2.0		1.79			54	22	No*	0.21	Yes	-29	-17
	Plan(s)	R3	Residential	Bedroom	W5	156°	7		1.09		8	8							
	DI ()		D. 11	11/5	144-	2111		1.0	0.15	1.09			8	8	Yes	-	Win only	17	-3
	Plan(s)	R4	Residential	LKD	W6 W7	211°	R N		0.49 1.21		19 48	16 17							
					VV /	156°	N	2.0	1.41	1.70	40	17	51	20	No*	0.30	Yes	-26	-15
	Plan(s)	R5	Residential	LKD	W8	156°	И		1.16		45	14				5.50	. 55		.5
	, ,				W9	101°	$\rightarrow$		0.23		8	0							
					W10	156°	Ŋ		0.48		9	6							
					W11	66°N	7		1.23		19	0							
	Dica/a)	DC	Donida (fin)	Dodes	10/40	CC011	_	2.0	0.50	3.10	00	0	57	14	Yes	-	Yes	-32	-9
	Plan(s)	R6	Residential	Bedroom	W12	66°N	7	1.0	2.50	2.50	22	2	22	2	Yes	-	No	3	3
	Plan(s)	R7	Residential	Bedroom	W13	66°N	7	1.0	1.16	2.30	11	0		_	162		TNU	3	3
	(-)				W14	21°N	1		1.06		0	0							
								1.0		2.22			11	0	Yes	-	No	14	5
	Plan(s)	R8	Residential	LKD	W15	21°N	$\uparrow$		1.26		4	0							
					W16	336°N	⋉		0.62		0	0							
	Dica/a)	DC	Donida (fin)	Dodes	\^/4=	225011	_	2.0	2.00	1.88	4		4	0	No*	0.12	No	21	5
	Plan(s)	R9	Residential	Bedroom	W17	336°N	K	1.0	2.06	2.06	1	0	1	0	Yes	-	No	24	5
	Plan(s)	R10	Residential	Bedroom	W18	336°N	K	1.0	1.87	2.00	2	0			163		140	۷٦	J
Orange	. ,						,				_								



Proper	ty, room	& wind	ow attributes					Day	light (B	RE)			t (BRE	)	Α	DF		APSH	
Floor	Flot no	Room	Property type	Doom was	٧	Vindow		Targe	ADF		AP win Annu	on dow Winte		ł room Winte		Short-	Satisfie s		rtfall winte
FIUUI	Flat no.	ref.	Froperty type	Noon use	Ref. &	Orientat	ion	t	win	ADF (%)	al	r		r	s BRE?	fall (ADF%)		/ (// )	r
								1.0	/ 9/2 1	1.87	/%1	/%_1	2	0	Yes	-	No	23	5
Ninth	Plan(s)	R1	Residential	Bedroom	W1	246°	Ľ		1.50		34	9							
					W2	156°	7		1.30	0.04	11	11	4.5	0.0					
	Plan(s)	R2	Residential	IKD	W3	211°	Ľ	1.0	0.51	2.81	20	17	45	20	Yes	-	Yes	-20	-15
	riali(5)	NZ	Residential	LND	W4	156°	N N		1.33		52	18							
								2.0		1.83			56	22	No*	0.17	Yes	-31	-17
	Plan(s)	R3	Residential	Bedroom	W5	156°	Ŋ		1.17		8	8							
								1.0		1.17			8	8	Yes	-	Win only	17	-3
	Plan(s)	R4	Residential	LKD	W6	211°	Ľ.		0.49		19	16							
					W7	156°	7	2.0	1.26	1.76	51	17	54	20	No*	0.24	Yes	-29	-15
	Plan(s)	R5	Residential	LKD	W8	156°	Ŋ	2.0	1.22	1.70	52	17	34	20	NO	0.24	163	-23	-13
	(-)				W9	101°	<b>→</b>		0.28		10	0							
					W10	156°	И		0.50		9	6	ĺ						
					W11	66°N	7		1.26		20	0							
								2.0		3.26			61	17	Yes	-	Yes	-36	-12
	Plan(s)	R6	Residential	Bedroom	W12	66°N	7	4.0	2.56	0.50	22	2	00		V		N.	0	_
	Dlan(a)	D7	Pacidential	Bedroom	\/\/12	66°N	7	1.0	1 10	2.56	11	0	22	2	Yes	-	No	3	3
	Plan(s)	R7	Residential	beuroom	W13 W14	66°N 21°N	<b>1</b>		1.18 1.09		11	0							
					****	21 11		1.0	1.00	2.27	U		11	0	Yes	-	No	14	5
	Plan(s)	R8	Residential	LKD	W15	21°N	$\uparrow$		1.37		4	0							
					W16	336°N	K		0.73		1	0							
								2.0		2.10			5	0	Yes	-	No	20	5
	Plan(s)	R9	Residential	Bedroom	W17	336°N	⋉		2.47		3	0							
	<b>-</b> . , ,							1.0		2.47			3	0	Yes	-	No	22	5
	Plan(s)	R10	Residential	Bedroom	W18	336°N	K	4.0	2.28	0.00	3	0	2	0	Van		NI=	20	-
Tenth	Plan(s)	R1	Residential	Bedroom	W1	246°	K	1.0	1.50	2.28	34	9	3	0	Yes	-	No	22	5
TOTAL	1 1411(3)	111	residential	Beardonn	W2	156°	7		1.17		10	9							
								1.0		2.67			44	18	Yes	-	Yes	-19	-13
	Plan(s)	R2	Residential	LKD	W3	211°	Ľ		0.46		18	16							
					W4	156°	7		1.37		56	20							
								2.0		1.83			59	23	No*	0.17	Yes	-34	-18
	Plan(s)	R3	Residential	Bedroom	W5	156°	7	4.0	1.07	4.07	9	8					10/1	40	
	Dlon(a)	R4	Residential	LKD	W6	211°	.,	1.0	0.45	1.07	10	15	9	8	Yes	-	Win only	16	-3
	Plan(s)	N4	Residential	LND	W7	156°	R N		1.33		18 53	18							
						150		2.0		1.78	00		55	20	No*	0.22	Yes	-30	-15
	Plan(s)	R5	Residential	LKD	W8	156°	И		1.29		52	17							
					W9	101°	$\rightarrow$		0.27		9	2							
					W10	156°	7		0.45		7	4							
					W11	66°N	7		1.30		21	1							
	Dic=(-)	DC	Donida (1)	Dodes	10/40	66001	7	2.0	0.00	3.31	00	0	63	19	Yes	-	Yes	-38	-14
	Plan(s)	R6	Residential	Bearoom	W12	66°N	7	1.0	2.62	2.62	22	2	22	2	Yes	-	No	3	3
	Plan(s)	R7	Residential	Bedroom	W13	66°N	7	1.0	1.20	2.02	11	0	22	2	169		TVU	3	, ,
	(-)				W14	21°N	<b>↑</b>		1.14		0	0							
								1.0		2.34			11	0	Yes	-	No	14	5
	Plan(s)	R8	Residential	LKD	W15	21°N	$\uparrow$		2.20		4	0							
					W16	336°N	K		0.75		1	0							
	Dis : ( )	Do	Davids (1.1	Dadiii	144-	22.00	_	2.0	0.51	2.95			5	0	Yes	-	No	20	5
	Plan(s)	R9	Residential	Bedroom	W17	336°N	K	1.0	2.51	2.51	3	0	3	0	Yes	-	No	22	5
	Plan(s)	R10	Residential	Bedroom	W18	336°N	K	1.0	2.31	2.01	3	0	3	U	168		INO	22	3
		0				230 14	,	1.0	,	2.31			3	0	Yes	-	No	22	5
Block	C Propos	ed																	
Ground	Plan(s)	R1	Residential	Bedroom	W1	271°N	$\leftarrow$		0.84		13	0							
					W2	226°	Ľ		0.87		30	9							
								1.0		1.71			32	9	Yes	-	Yes	-7	-4



Prope	ty, room	& wind	ow attributes					Day	light (B	RE)	;	Sunligh	t (BRE	)	ΑI	)F		APSH	
		Poom			٧	/indow			ADF		AP win		APSH	room	Satisfie	Short-	Satisfie	Shor	tfall
Floor	Flat no.	Room ref.	Property type	Room use	Ref. &	Orienta	tion	Targe t	ADF win	ADF	Anħü" al	dow Winte r	Annua I	vvinte r	s BRF?	fall (ADF%)	s BRE?	Annua I	vvinte r
	Plan(s)	R2	Residential	IKD	W3	226°	Ľ	(%)	(%) 1.14	(%)	36	9	(%)	(%)	DILL !	(ADI 70)	DIVE:	(%)	(%)
	i iaii(s)	112	residerillar	LND	W4	136°	7		0.07		0	0							
					W5	191°	<b>↓</b>		0.16		4	2							
					W6	136°	7		0.91		21	0							
								2.0		2.27			55	9	Yes	-	Yes	-30	-4
	Plan(s)	R3	Residential	Bedroom	W7	136°	7		0.00		0	0							
								1.0		0.00	_		0	0	No	1.00	No	25	5
	Plan(s)	R4	Residential	LKD	W8	191° 136°	<b>V</b>		0.16		3 22	2							
					W9	150	7	2.0	0.95	1.11	22	2	22	2	No	0.89	No	3	3
	Plan(s)	R5	Residential	Bedroom	W10	136°	7	2.0	0.00		0	0		_	140	0.00	140	Ū	J
	(-)							1.0		0.00			0	0	No	1.00	No	25	5
	Plan(s)	R6	Residential	LKD	W11	191°	<b>4</b>		0.20		5	2							
					W12	136°	7		0.98		22	2							
								2.0		1.18			23	2	No	0.82	No	2	3
	Plan(s)	R7	Residential	LKD	W13	136°	7		0.96		21	2							
					W14 W15	81°N 136°	→		0.19		7	0							
					W15	46°N	7		0.14 0.46		0	0							
					0	70 14	,.	2.0	5.70	1.75	J		24	2	No*	0.25	No	1	3
	Plan(s)	R8	Residential	Bedroom	W17	46°N	7		0.91		0	0							
								1.0		0.91			0	0	No	0.09	No	25	5
First	Plan(s)	R1	Residential	Bedroom	W1	316°N	K		2.01		7	0							
								1.0		2.01			7	0	Yes	-	No	18	5
	Plan(s)	R2	Residential	Bedroom	W2	316°N	K		2.19		8	0	-						
	DI (-)	Do	Deside of all	LIZD	14/0	0.4.501.1		1.0	0.00	2.19	0		8	0	Yes	-	No	17	5
	Plan(s)	R3	Residential	LKD	W3 W4	316°N 271°N	K		0.66 1.37		3 22	7							
					VV-4	Z/1 IV	_	2.0	1.57	2.03	22	,	23	7	Yes	-	Win only	2	-2
	Plan(s)	R4	Residential	Bedroom	W5	271°N	<b>←</b>	2.0	1.14	2.00	15	0		·	. 66			_	_
	( )				W6	226°	ĸ		1.17		36	11							
								1.0		2.31			40	11	Yes	-	Yes	-15	-6
	Plan(s)	R5	Residential	Bedroom	W7	226°	Ľ		2.49		46	12							
								1.0		2.49			46	12	Yes	-	Yes	-21	-7
	Plan(s)	R6	Residential	LKD	W8	226°	<b>L</b>		1.22		46	12							
					W9 W10	136° 191°	Λ 71		0.15 0.17		1 6	5							
					W11	136°	7		0.86		29	3							
						100	_	2.0	0.00	2.40			68	13	Yes	-	Yes	-43	-8
	Plan(s)	R7	Residential	Bedroom	W12	136°	7		0.26		1	1							
								1.0		0.26			1	1	No	0.74	No	24	4
	Plan(s)	R8	Residential	LKD	W13	191°	<b>\</b>		0.24		6	3							
					W14	136°	7		0.89		32	5		_			,,	_	_
	Dlan(a)	D0	Decidential	Redroom	\\/1E	1260	ν.	2.0	0.20	1.13	1	1	32	5	No	0.87	Yes	-7	0
	Plan(s)	R9	Residential	Deuloom	W15	136°	7	1.0	0.28	0.28	1	1	1	1	No	0.72	No	24	4
	Plan(s)	R10	Residential	LKD	W16	191°	<b>V</b>	1.0	0.26	0.20	6	3			140	5.72	140	27	7
	·-/				W17	136°	R		0.90		29	3							
								2.0		1.15			29	3	No	0.85	Ann only	-4	2
	Plan(s)	R11	Residential	Bedroom	W18	136°	7		0.32		0	0							
								1.0		0.32			0	0	No	0.68	No	25	5
	Plan(s)	R12	Residential	LKD	W19	191°	<b>V</b>		0.28		8	5							
					W20	136°	7	2.0	0.90	1.18	29	4	20		No	0.82	Voo	E	0
	Plan(s)	R13	Residential	LKD	W21	136°	7	2.0	0.89	1.18	27	4	30	5	No	0.62	Yes	-5	U
	(3)				W22	81°N	<b>→</b>		0.13		3	0							
					W23	136°	7		0.16		1	0							
					W24	46°N	7		0.43		1	0							
								2.0		1.61			29	4	No*	0.39	Ann only	-4	1
	Plan(s)	R14	Residential	Bedroom	W25	46°N	7		0.92		0	0							
	DI. ()	D.1=	D. 11	D . /	1415	4.50		1.0	0.15	0.92			0	0	No	0.08	No	25	5
	Plan(s)	R15	Residential	Bedroom	W26	46°N	7		0.43		0	0							



Proper	ty, room	& wind	ow attributes					Day	rlight (B	RE)	;	Sunligh	nt (BRE	)	ΑI	)F		APSH	
	<b>J</b> ,				V	Vindow			ADF	,	AP	оп -	V D S H	room	Satisfie		Satisfie	Sho	rtfall
Floor	Flat no.	Room ref.	Property type	Room use	Ref. &	Orientat	ion	Targe t	ADF win	ADF	Anhu" al	dow Winte r	Annua I	Winte r	s BRE?	fall (ADF%)	s BRE?	Annua I	winte r
					W27	1°N	<b>1</b>	(%)	0.88	(%)	(%) 0	(%)	(%)	(%)	BKE!	(ADI 70)	DKE!	(%)	(%)
					VVZI	T IA	T	1.0	0.00	1.31	U	U	0	0	Yes	-	No	25	5
	Plan(s)	R16	Residential	LKD	W28	1°N	1		1.02		0	0			. 00		110	20	Ü
	` '				W29	316°N	K		0.68		3	0							
								2.0		1.70			3	0	No*	0.30	No	22	5
	Plan(s)	R17	Residential	Bedroom	W30	316°N	⋉		2.23		7	0							
								1.0		2.23			7	0	Yes	-	No	18	5
	Plan(s)	R18	Residential	Bedroom	W31	316°N	K		2.03		6	0							
0	DI (-)	D4	Desident d	D	18/4	0.4.500.1	_	1.0	0.47	2.03	0		6	0	Yes	•	No	19	5
Second	Plan(s)	R1	Residential	Bearoom	W1	316°N	K	1.0	2.17	2.17	9	0	9	0	Yes	-	No	16	5
	Plan(s)	R2	Residential	Bedroom	W2	316°N	K	1.0	2.38	2.17	9	0	9	0	162	-	INO	10	3
	i idii(o)	112	rtoolaorillar	Douloom	***	310 14	- (	1.0	2.00	2.38	U		9	0	Yes	_	No	16	5
	Plan(s)	R3	Residential	LKD	W3	316°N	K		0.72		4	0							
					W4	271°N	<b>←</b>		1.56		26	9							
								2.0		2.28			26	9	Yes	-	Yes	-1	-4
	Plan(s)	R4	Residential	Bedroom	W5	271°N	$\leftarrow$		1.24		21	2	ļ						
					W6	226°	Ľ		1.24		39	14							
				_				1.0		2.48			47	14	Yes	-	Yes	-22	-9
	Plan(s)	R5	Residential	Bedroom	W7	226°	K	, -	2.66		51	17		4-					
	Dic=(-)	DO	Donida (fat	LKD	14/0	2269		1.0	4.00	2.66	40	15	51	17	Yes	-	Yes	-26	-12
	Plan(s)	R6	Residential	LKD	W8 W9	226°	K.		1.30 0.24		49 1	15 1							
					W10	136° 191°	↑ 7		0.24		9	8							
					W10	136°	7		0.24		36	6							
						150	Ī	2.0	0.0.	2.75	00		76	17	Yes	-	Yes	-51	-12
	Plan(s)	R7	Residential	Bedroom	W12	136°	7		0.65		3	1							
								1.0		0.65			3	1	No	0.35	No	22	4
	Plan(s)	R8	Residential	LKD	W13	191°	$\downarrow$		0.31		12	9							
					W14	136°	7		1.00		36	6							
								2.0		1.31			39	9	No	0.69	Yes	-14	-4
	Plan(s)	R9	Residential	Bedroom	W15	136°	7		0.65		4	2							
	DI ()	D.4.0	5	11/2	14/40			1.0	0.00	0.65	40		4	2	No	0.35	No	21	3
	Plan(s)	R10	Residential	LKD	W16	191°	<b>V</b>		0.32		12	9							
					W17	136°	7	2.0	1.00	1.32	37	, 	40	10	No	0.68	Yes	-15	-5
	Plan(s)	R11	Residential	Bedroom	W18	136°	لا	2.0	0.65	1.52	4	2	1 40	10	140	0.00	163	-13	-5
	(-)							1.0		0.65			4	2	No	0.35	No	21	3
	Plan(s)	R12	Residential	LKD	W19	191°	4		0.33		12	9							
					W20	136°	7		1.00		32	6							
								2.0		1.33			35	9	No	0.67	Yes	-10	-4
	Plan(s)	R13	Residential	LKD	W21	136°	7		0.98		31	6							
					W22	81°N	$\rightarrow$		0.17		5	0							
					W23	136°	7		0.24		2	1							
					W24	46°N	7	2.0	0.47	1.07	1	0	25	7	Ne*	0.43	Vo-	40	2
	Plan(s)	R14	Residential	Bedroom	W25	46°N	7	2.0	1.01	1.87	0	0	35	7	No*	0.13	Yes	-10	-2
	1 1011(3)	1114	Residential	Dearoom	V V Z J	40 IV	/	1.0	1.01	1.01	J	U	0	0	Yes	-	No	25	5
	Plan(s)	R15	Residential	Bedroom	W26	46°N	7		0.48		0	0			, 55				
	(-/				W27	1°N	1		0.94		0	0							
								1.0		1.42			0	0	Yes	-	No	25	5
	Plan(s)	R16	Residential	LKD	W28	1°N	$\uparrow$		1.11		1	0							
					W29	316°N	K		0.72		4	0							
								2.0		1.83			5	0	No*	0.17	No	20	5
	Plan(s)	R17	Residential	Bedroom	W30	316°N	K	, -	2.38		9	0							_
	Die=/-)	D40	Don'd a state	Dodas	14/04	24.000	-	1.0	0.40	2.38	0	0	9	0	Yes	-	No	16	5
	Plan(s)	R18	Residential	Bedroom	W31	316°N	K	1.0	2.18	2.18	8	0	8	0	Yes	-	No	17	5
Third	Plan(s)	R1	Residential	Bedroom	W1	316°N	K	1.0	2.32	2.10	10	0	0	0	168		INO	17	5
. mu	(3)	111		200100111	***	210 14	- \	1.0	2.02	2.32	7.0		10	0	Yes	-	No	15	5
	Plan(s)	R2	Residential	Bedroom	W2	316°N	K		2.55		10	0			, ,				
	,							1.0		2.55			10	0	Yes	-	No	15	5

Proper	ty, room	& wind	ow attributes					Day	/light (B	RE)		Sunligh	t (BRE		ΑI	)F		APSH	
	,				V	Vindow			ADF	,	AP	оп -	A D S H		Satisfie	Short-	Satisfie	Sho	rtfall
Floor	Flat no.	Room ref.	Property type	Room use	Ref. &	Orientat	tion	Targe t	ADF win	ADF	Anhu" al	dow Winte r	Annua I	Winte r	s	fall (ADF%)	s BRE?	Annua I	winte r
	Plan(s)	R3	Residential	IKD	W3	316°N	K	(%)	0.77	(%)	(%) 5	(%)	(%)	(%)	DIVE:	(ADI 70)	DILL:	(%)	(%)
	1 1011(3)	11.0	residential	LIND	W4	271°N	<b>+</b>		2.51		36	9							
								2.0		3.28			36	9	Yes	-	Yes	-11	-4
	Plan(s)	R4	Residential	Bedroom	W5	271°N	$\leftarrow$		1.33		22	3							
					W6	226°	Ľ		1.30	0.00	40	15	40	4.5	.,				
	Plan(s)	R5	Residential	Bedroom	W7	226°	Ľ	1.0	2.80	2.62	53	19	48	15	Yes	-	Yes	-23	-10
	i iaii(s)	11.0	Residential	Deciroom	***	220	_	1.0	2.00	2.80	00	13	53	19	Yes	-	Yes	-28	-14
	Plan(s)	R6	Residential	LKD	W8	226°	Ľ		1.37		53	19							
					W9	136°	7		0.28		4	4							
					W10	191°	4		0.25		8	8							
					W11	136°	7	2.0	1.10	2.00	42	10	0.5	24	Yes	_	Yes	60	10
	Plan(s)	R7	Residential	Bedroom	W12	136°	N	2.0	0.69	2.99	4	2	85	24	res	-	res	-60	-19
	1 1011(0)	177	rtoolaonilai	Dodroom	**	130	-	1.0	0.00	0.69	,	_	4	2	No	0.31	No	21	3
	Plan(s)	R8	Residential	LKD	W13	191°	<b>4</b>		0.32		12	9							
					W14	136°	7		1.12		41	10							
								2.0		1.44			43	12	No	0.56	Yes	-18	-7
	Plan(s)	R9	Residential	Bedroom	W15	136°	7		0.92	0.00	8	5	0	-			140		
	Plan(s)	R10	Residential	LKD	W16	191°	<b>4</b>	1.0	0.37	0.92	15	12	8	5	No	0.08	Win only	17	0
	i iaii(s)	ICIO	rtesideriliai	LIND	W17	136°	7		1.11		43	12							
								2.0		1.49			45	14	No	0.51	Yes	-20	-9
	Plan(s)	R11	Residential	Bedroom	W18	136°	7		0.90		7	4							
								1.0		0.90			7	4	No	0.10	No	18	1
	Plan(s)	R12	Residential	LKD	W19	191°	<b>\</b>		0.39		15	12	İ						
					W20	136°	7	2.0	1.11	4.40	41	13	40	45	NI=	0.54	V	40	40
	Plan(s)	R13	Residential	LKD	W21	136°	7	2.0	1.08	1.49	39	12	43	15	No	0.51	Yes	-18	-10
	i iaii(s)	ICIO	Residential	LIND	W22	81°N	<b>→</b>		0.21		6	0							
					W23	136°	7		0.37		3	2							
					W24	46°N	7		0.53		2	0							
								2.0		2.20			42	13	Yes	-	Yes	-17	-8
	Plan(s)	R14	Residential	Bedroom	W25	46°N	7		1.14		0	0	0		.,			~=	_
	Plan(a)	R15	Residential	Bedroom	W26	46°N	71	1.0	0.55	1.14	0	0	0	0	Yes	-	No	25	5
	Plan(s)	KIS	Residential	Deulooni	W27	1°N	<b>1</b>		0.99		0	0							
								1.0		1.54			0	0	Yes	-	No	25	5
	Plan(s)	R16	Residential	LKD	W28	1°N	$\uparrow$		1.20		1	0							
					W29	316°N	↖		0.76		5	0							
	DI. ( )	D.1=	D	D. I	1445	24.55	_	2.0	6.55	1.96			5	0	No*	0.04	No	20	5
	Plan(s)	R17	Residential	Bedroom	W30	316°N	K	1.0	2.52	2.52	10	0	10	0	Yes		No	15	5
	Plan(s)	R18	Residential	Bedroom	W31	316°N	K	1.0	2.31	2.02	10	0	10	J	168	-	INU	13	5
	(0)	0						1.0		2.31			10	0	Yes	-	No	15	5
Fourth	Plan(s)	R1	Residential	Bedroom	W1	226°	Ľ		1.34		37	15							
					W2	136°	7		1.16		12	8							
	<b>D</b> I. ( )			1175				1.0		2.50			49	23	Yes	-	Yes	-24	-18
	Plan(s)	R2	Residential	LKD	W3 W4	191° 136°	7ı ↑		0.44 1.23		20 49	17 16							
					V V <del>41</del>	130	71	2.0	1.23	1.67	73	10	53	20	No*	0.33	Yes	-28	-15
	Plan(s)	R3	Residential	Bedroom	W5	136°	Ŋ		1.09		12	8							
								1.0		1.09			12	8	Yes	-	Win only	13	-3
	Plan(s)	R4	Residential	LKD	W6	191°	<b>V</b>		0.43		18	15							
					W7	136°	7		1.22	4	46	16		40		0.5-	,,		
	Dlon(s)	D.F	Pooldontial	LKD	1410	136°	N	2.0	1.19	1.65	15	17	48	18	No*	0.35	Yes	-23	-13
	Plan(s)	R5	Residential	LVD	W8 W9	136° 81°N	→		0.25		45 8	17							
					W10	136°	<u>\</u>		0.47		7	6							
					W11	46°N	7		0.61		3	0							
								2.0		2.51			48	17	Yes	-	Yes	-23	-12
	Plan(s)	R6	Residential	Bedroom	W12	46°N	7		1.31		0	0							



Prope	rty, room	& wind	ow attributes					Day	/light (B	RE)			nt (BRE)	)	AI	)F		APSH	
		Room			V	/indow			ADF		win	SП dow	APSH		Satisfie	Short-	Satisfie	Shoi	
Floor	Flat no.	ref.	Property type	Room use	Ref. &	Orientat	tion	Targe t	ADF win	ADF (%)	Annu al	vvinte r	Annua I	Winte r	s BRE?	fall (ADF%)	s BRE?	Annua I	vvinte r (%)
								1.0		1.31			0	0	Yes	-	No	25	5
	Plan(s)	R7	Residential	Bedroom	W13	46°N	7		0.64		0	0							
					W14	1°N	$\uparrow$		1.05		0	0							
								1.0		1.69			0	0	Yes	-	No	25	5
	Plan(s)	R8	Residential	LKD	W15	1°N	$\uparrow$		1.29		1	0							
					W16	316°N	K		0.78		5	0							
								2.0		2.07			5	0	Yes	-	No	20	5
	Plan(s)	R9	Residential	Bedroom	W17	316°N	⋉		2.60		10	0							
								1.0		2.60			10	0	Yes	-	No	15	5
	Plan(s)	R10	Residential	Bedroom	W18	316°N	K		2.38		10	0							
								1.0		2.38			10	0	Yes	-	No	15	5
Fifth	Plan(s)	R1	Residential	Bedroom	W1	226°	Ľ		1.48		40	15							
					W2	136°	7		1.14		9	7							
								1.0		2.62			49	22	Yes	-	Yes	-24	-17
	Plan(s)	R2	Residential	LKD	W3	191°	$\downarrow$		0.44		18	15							
					W4	136°	7		1.33		50	17							
								2.0		1.77			53	20	No*	0.23	Yes	-28	-15
	Plan(s)	R3	Residential	Bedroom	W5	136°	7		1.07		9	7							
								1.0		1.07			9	7	Yes	-	Win only	16	-2
	Plan(s)	R4	Residential	LKD	W6	191°	$\downarrow$		0.43		17	14							
					W7	136°	7		1.31		50	18							
								2.0		1.74			52	20	No*	0.26	Yes	-27	-15
	Plan(s)	R5	Residential	LKD	W8	136°	7		1.28		48	18							
					W9	81°N	$\rightarrow$		0.24		7	2							
					W10	136°	7		0.45		6	5							
					W11	46°N	7		0.71		5	0							
								2.0		2.69			51	18	Yes	-	Yes	-26	-13
	Plan(s)	R6	Residential	Bedroom	W12	46°N	7		1.53		0	0							
								1.0		1.53			0	0	Yes	-	No	25	5
	Plan(s)	R7	Residential	Bedroom	W13	46°N	7		0.75		0	0							
					W14	1°N	$\uparrow$		1.12		0	0							
								1.0		1.86			0	0	Yes	-	No	25	5
	Plan(s)	R8	Residential	LKD	W15	1°N	$\uparrow$		2.15		1	0							
					W16	316°N	K		0.79		5	0							
								2.0		2.94			5	0	Yes	-	No	20	5
	Plan(s)	R9	Residential	Bedroom	W17	316°N	K		2.63		10	0							
								1.0		2.63			10	0	Yes	-	No	15	5
	Plan(s)	R10	Residential	Bedroom	W18	316°N	K		2.41		10	0							
								1.0		2.41			10	0	Yes	-	No	15	5



# Appendix 4 Daylight and sunlight results for neighbouring buildings

Date: 12/04/2022

Daylight / Sunlight Neighbouring Properties



Scheme: SR\_08/04/2022 Scenario: Existing Vs Proposed

Prope	rty, roo	m & window attribut	es			VS	SC			N	SL				AP	SH (roc	m)		
Floor	Room F	Room use		ndow	Exis. (%	Prop. (%	Loss (%	Pro./Ex	Exis.	Prop.	Loss	Pro./E	/	Annual (	%APSH	<i>'</i> )	Wint	ter (%AF	PSH)
1 1001	IXOOIII I	Coom ase	Ref./O	rientatio n	VSC)	VSC)	VSC)	. ratio	(% rm)	(% rm)	(m <sup>2</sup> )	x. ratio	Exis.	Prop.	Loss	Pro./Ex	Exis.	Prop. F	Pro./Ex
	ry Terra		10/4		05.0	05.0	D.1/0	λ1/A											
Secon	R1	Bedroom	W1	<u> </u>	35.8	35.8	N/A	N/A	000/	000/	0.04	4.00	N/D	NI/D	NI/D	NI/D	AL/D	NI/D	NI/D
		Bedroom	W2	$\rightarrow$	29.0	28.7	N/A	N/A	98%	98%	0.01	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
4 Prio	ry Terra	ace																	
First	R1	Bedroom	W1	$\rightarrow$	27.6	27.0	N/A	N/A	94%	94%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
Secon	R1	Bedroom	W1	$\rightarrow$	29.8	29.4	N/A	N/A	96%	96%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
6 Prio er Grc	ry Terra	Bedroom	W1	$\rightarrow$	18.5	17.8	0.6	0.97											
ei Gic	IXI	Bedroom	W2	$\rightarrow$	17.1	17.0	0.0	1.00	78%	78%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R2	Living Room	W3	<b>+</b>	12.6	12.6	0.0	1.00	7070	7070	0.00	1.00	14/13	14/13	14/13	14/13	14/1	14/13	14/13
		Living Room	W4	$\rightarrow$	22.3	20.5	1.8	0.92											
		Living Room	W5	<b>↑</b>	22.2	20.2	2.0	0.91											
		Living Room	W6	Inc	75.5	74.0	N/A	N/A	100%	100%	0.00	1.00	50	50	N/A	N/A	7	7	N/A
3roun(	R1	LK	W5	$\rightarrow$	27.0	26.0	1.1	0.96	76%	76%	0.09	0.99	40	40	N/A	N/A	6	6	N/A
	R2	Living Room	W1	$\downarrow$	13.9	13.9	0.0	1.00											
		Living Room	W2	$\rightarrow$	25.8	24.8	1.0	0.96											
		Living Room	W3	$\uparrow$	18.0	16.9	1.0	0.94											
		Living Room	W4	Inc	63.1	62.6	N/A	N/A	100%	100%	0.00	1.00	51	51	N/A	N/A	11	11	N/A
First	R2	Bedroom	W3	$\rightarrow$	29.9	29.1	N/A	N/A	97%	97%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
Secon	R1	Bedroom	W1	$\rightarrow$	31.7	31.0	N/A	N/A											
		Bedroom	W2	$\rightarrow$	31.8	31.1	N/A	N/A											
		Bedroom	W3	$\downarrow$	35.0	35.0	N/A	N/A	99%	99%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
8 Prio	ry Terra	ace																	
er Grc	_	Living Room	W1	$\rightarrow$	25.0	22.7	2.3	0.91											
51 510	1 1 1	Living Room	V V I		20.0	<i>LL</i> .1	2.0	0.01											

Date: 12/04/2022 Scheme: SR\_08/04/2022 Scenario: Existing Vs Proposed



Proper	rty, roor	n & window attribu	tes			V	SC			NS	SL				AP	SH (ro	om)		
Floor F	Room R	oom use		ndow	Exis. (%	Prop. <i>(%</i>	Loss (%	Pro./Ex	_	Prop.	Loss	Pro./E	1	Annual (	%APSH	<i>'</i> )	Win	ter (%A	PSH)
. 1001			Ref./O	rientatio n	VSC)	VSC)	VSC)	. ratio	(% rm)	(% rm)	(m <sup>2</sup> )	x. ratio	Exis.	Prop.	Loss	Pro./Ex	Exis.	Prop.	Pro./Ex
		Living Room	W2	$\rightarrow$	25.3	22.5	2.8	0.89	92%	71%	3.48	0.78	39	39	N/A	N/A	6	6	N/A
3roun(	R1	KD	W1	$\rightarrow$	28.0	26.5	1.5	0.95	89%	88%	0.27	0.98	45	45	N/A	N/A	11	11	N/A
First	R1	Bedroom	W1	$\rightarrow$	30.3	29.3	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
3econ(	R1	Bedroom	W1	$\rightarrow$	32.0	31.2	N/A	N/A											
		Bedroom	W2	$\uparrow$	32.2	31.5	N/A	N/A	99%	99%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
10 Pric	ory Terra	ace																	
er Grc	R1	Living Room	W1	$\rightarrow$	15.6	15.1	0.4	0.97	46%	40%	0.79	0.88	36	34	N/A	N/A	4	4	1.00
	R2	Living Room	W2	$\rightarrow$	26.2	21.1	5.1	0.80											
		Living Room	W3	$\rightarrow$	26.1	20.2	5.9	0.77	77%	53%	5.61	0.69	45	39	N/A	N/A	11	11	N/A
3roun(	R2	KD	W2	$\rightarrow$	28.8	25.4	3.4	0.88	80%	52%	5.48	0.65	50	44	N/A	N/A	13	13	N/A
First	R2	Bedroom	W2	$\rightarrow$	30.9	28.5	N/A	N/A	95%	93%	0.20	0.99	N/R	N/R	N/R	N/R	N/R	N/R	N/R
Secon	R1	Bedroom	W1	$\downarrow$	34.3	34.3	N/A	N/A											
		Bedroom	W2	$\rightarrow$	32.3	30.7	N/A	N/A	99%	98%	0.17	0.99	N/R	N/R	N/R	N/R	N/R	N/R	N/R
12 Pric	ory Terra	ace																	
er Grc	R1	LD	W1	$\rightarrow$	23.9	17.8	6.1	0.74											
		LD	W2	$\rightarrow$	26.5	20.0	6.5	0.76											
		LD	W3	$\uparrow$	14.8	13.7	1.1	0.93											
		LD	W4	$\rightarrow$	16.4	12.3	4.1	0.75	58%	48%	3.58	0.83	45	35	N/A	N/A	10	10	N/A
3roun(	R1	KD	W1	$\rightarrow$	28.9	24.8	4.1	0.86	97%	72%	4.44	0.75	50	43	N/A	N/A	13	13	N/A
First	R1	Bedroom	W1	$\rightarrow$	30.9	27.9	N/A	N/A	96%	86%	1.82	0.90	N/R	N/R	N/R	N/R	N/R	N/R	N/R
Secon	R1	Bedroom	W1	$\rightarrow$	32.3	30.2	N/A	N/A	94%	73%	3.86	0.78	N/R	N/R	N/R	N/R	N/R	N/R	N/R
14 Pric	ory Terra	ace																	
asemeR	loom 1	Living Room	WB_0	1 →	27.0	21.4	5.6	0.79	98%	54%	4.04	0.56	47	36	N/A	N/A	13	12	N/A
R	loom 2	Living Room	WB_0	2 →	26.8	21.2	5.6	0.79											
		Living Room	WB_0	3 →	26.3	21.1	5.3	0.80	98%	70%	5.31	0.72	48	36	N/A	N/A	13	11	N/A

Project : 19495 - Abbey Road, London, N Date: 12/04/2022 Scheme: SR\_08/04/2022

Scenario: Existing Vs Proposed



Property, room	n & window attribu	ites		V	sc			N:	SL				AP	SH (roc	om)		
Floor Room Ro	oom use	Window Ref./Orientatio	Exis. (%	Prop. <i>(%</i>	Loss (%	Pro./Ex	_	Prop.	Loss	Pro./E		Annual (	(%APSH	f)		er (%AF	PSH)
		n Rei./Orientatio	VSC)	VSC)	VSC)	. ratio	(% rm)	(% rm)	(m <sup>2</sup> )	x. ratio	Exis.	Prop.	Loss	Pro./Ex	Exis.	Prop.	Pro./Ex
Groun@oom 1	Living Room	WG_01 →	29.1	24.1	5.0	0.83	99%	87%	1.10	0.88	53	45	N/A	N/A	18	16	N/A
Room 2	Living Room	WG_02 →	28.8	23.6	5.2	0.82											
	Living Room	WG_03 →	28.5	23.5	5.1	0.82	99%	92%	1.26	0.93	53	43	N/A	N/A	18	15	N/A
First Room 1	Living Room	W1_01 →	31.1	27.3	N/A	N/A	99%	95%	0.37	0.96	56	48	N/A	N/A	18	17	N/A
Room 2	Living Room	W1_02 →	30.9	27.0	N/A	N/A											
	Living Room	W1_03 →	30.7	26.8	4.0	0.87	99%	97%	0.36	0.98	56	49	N/A	N/A	18	17	N/A
SeconRoom 1	Living Room	W2_01 →	32.8	30.2	N/A	N/A	98%	98%	0.01	1.00	58	51	N/A	N/A	19	18	N/A
Room 2	Living Room	W2_02 →	32.7	29.9	N/A	N/A											
	Living Room	W2_03 →	32.5	29.6	N/A	N/A	98%	98%	0.00	1.00	58	50	N/A	N/A	19	17	N/A
16 Priory Terra	ice																
asemeRoom 1	Living Room	WB_01 →	25.5	21.1	4.4	0.83											
	Living Room	WB_02 →	24.7	21.0	3.6	0.85	95%	73%	4.43	0.76	47	37	N/A	N/A	15	12	N/A
Room 2	Living Room	WB_03 →	23.8	20.9	2.9	0.88	82%	63%	1.66	0.77	46	38	N/A	N/A	16	12	N/A
Groun@oom 1	Living Room	WG_01 →	28.1	23.4	4.7	0.83											
	Living Room	WG_02 →	27.6	23.3	4.3	0.84	99%	93%	1.01	0.95	52	43	N/A	N/A	18	14	N/A
Room 2	Living Room	WG_03 →	27.1	23.3	3.8	0.86	99%	89%	0.89	0.90	50	43	N/A	N/A	17	14	N/A
First Room 1	Living Room	W1_01 →	30.4	26.6	3.8	0.87											
	Living Room	W1_02 →	30.1	26.5	3.6	0.88	98%	98%	0.07	1.00	52	49	N/A	N/A	18	17	N/A
Room 2	Living Room	W1_03 →	29.6	26.3	3.4	0.89	99%	95%	0.32	0.96	52	49	N/A	N/A	18	17	N/A
SeconRoom 1	Living Room	W2_01 →	32.2	29.4	N/A	N/A											
	Living Room	W2_02 →	32.0	29.3	N/A	N/A	98%	98%	0.00	1.00	56	50	N/A	N/A	18	17	N/A
Room 2	Living Room	W2_03 →	31.6	29.0	N/A	N/A	99%	99%	0.00	1.00	56	50	N/A	N/A	19	17	N/A
18 Priory Terra	ice																
asemeKitcher	Kitchen	WB_02 →	22.6	21.5	1.1	0.95	55%	63%	-0.52	1.14	N/R	N/R	N/R	N/R	N/R	N/R	N/R
Bedroor	Bedroom	WB_01 →	22.9	21.5	1.4	0.94	68%	71%	-0.48	1.04	N/R	N/R	N/R	N/R	N/R	N/R	N/R
Groun Kitcher	Kitchen	WG_02 →	26.1	23.6	2.5	0.90	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R

Daylight / Sunlight Neighbouring Properties DELVA PATMAN REDLER

Chartered Surveyors

	osea																
Property, room	a & window attrib	utes		VS	SC			N:	SL				AP	SH (ro	om)		
Floor Room Ro	oom use	Window Ref./Orientatio n	Exis. (% VSC)	Prop. (% VSC)	Loss (% VSC)	Pro./Ex . ratio	Exis. (% rm)	Prop. (% rm)	Loss (m²)	Pro./E x. ratio	Exis.	Annual ( Prop.		<i>f)</i> Pro./Ex		ter <i>(%A</i> Prop.	<i>PSH)</i> Pro./Ex
Bedroor	Bedroom	WG_01 →	26.6	23.7	2.8	0.89	96%	95%	0.03	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
First edroom	Bedroom	W1_01 →	29.5	26.6	2.9	0.90	95%	94%	0.15	0.99	N/R	N/R	N/R	N/R	N/R	N/R	N/R
∍droom	Bedroom	W1_02 →	29.2	26.4	2.8	0.90											
	Bedroom	W1_03 →	29.2	26.4	2.8	0.90	97%	97%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
Seconedroom	Bedroom	W2_01 →	31.7	29.1	N/A	N/A	95%	94%	0.22	0.98	N/R	N/R	N/R	N/R	N/R	N/R	N/R
edroom	Bedroom	W2_02 →	31.3	28.7	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
20 Priory Terra	ice																
asemeadroom	Bedroom	WB_01 →	22.5	21.5	0.9	0.96	65%	61%	0.48	0.93	N/R	N/R	N/R	N/R	N/R	N/R	N/R
∍droom	Bedroom	WB_02 →	22.1	21.3	0.8	0.96	63%	66%	-0.47	1.05	N/R	N/R	N/R	N/R	N/R	N/R	N/R
Grounedroom	Bedroom	WG_01 →	25.7	23.5	2.1	0.92	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
∍droom	Bedroom	WG_02 →	25.5	23.4	2.0	0.92	97%	90%	0.92	0.93	N/R	N/R	N/R	N/R	N/R	N/R	N/R
First edroom	Bedroom	W1_01 →	29.1	26.4	2.7	0.91											
	Bedroom	W1_02 →	28.8	26.1	2.6	0.91	97%	97%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
∍droom	Bedroom	W1_03 →	28.5	26.0	2.5	0.91	96%	96%	0.03	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
Seconedroom	Bedroom	W2_01 →	31.1	28.6	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
∍droom	Bedroom	W2_02 →	30.7	28.3	N/A	N/A	96%	95%	0.12	0.99	N/R	N/R	N/R	N/R	N/R	N/R	N/R
22 Priory Terra	ice																
asemehen_Di	Kitchen	WB_01 →	22.1	21.3	0.8	0.96											
	Kitchen	WB_02 →	22.6	21.5	1.1	0.95	89%	85%	0.85	0.96	N/R	N/R	N/R	N/R	N/R	N/R	N/R
3roun∂com 1	Living Room	WG_01 →	25.4	23.5	1.9	0.93											
	Living Room	WG_02 →	25.2	23.3	1.8	0.93	98%	98%	0.01	1.00	50	43	N/A	N/A	16	13	N/A
First Room 1	Bedroom	W1_03 →	28.5	26.1	2.4	0.91	97%	97%	0.01	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
Room 2	Bedroom	W1_01 →	28.1	25.9	2.2	0.92	91%	81%	0.81	0.89	N/R	N/R	N/R	N/R	N/R	N/R	N/R
SeconRoom 1	Bedroom	W2_01 →	30.6	28.2	N/A	N/A	98%	96%	0.17	0.99	N/R	N/R	N/R	N/R	N/R	N/R	N/R
Room 2	Bedroom	W2 02 →	30.3	27.9	N/A	N/A	99%	97%	0.13	0.98	N/R	N/R	N/R	N/R	N/R	N/R	N/R

Daylight / Sunlight Neighbouring Properties DELVA PATMAN REDLER

Chartered Surveyors

: Existing vs Propo	oseu																
Property, room	n & window attrib	utes			SC			NS	SL				AP	SH (ro	om)		
Floor Room Ro	oom use	Window Ref./Orientatio	Exis. (% VSC)	Prop. (% VSC)	Loss (% VSC)	Pro./Ex . ratio	Exis. (% rm)	Prop. (% rm)	Loss (m²)	Pro./E x. ratio	Exis.	Annual ( Prop.		<i>f)</i> Pro./Ex		ter <i>(%A</i> Prop.	A <i>PSH)</i> Pro./Ex
24 Priory Terra	се																
asemeRoom 1	Living Room	WB_01 →	22.5	21.4	1.2	0.95	81%	70%	0.99	0.86	45	41	N/A	N/A	14	11	N/A
Room 2	Living Room	WB_02 →	21.8	20.8	1.0	0.95	84%	68%	2.26	0.80	44	42	N/A	N/A	12	12	N/A
3roun@oom 1	Living Room	WG_01 →	24.8	23.1	1.7	0.93	98%	94%	0.38	0.97	48	44	N/A	N/A	14	13	N/A
Room 2	Living Room	WG_02 →	24.4	22.8	1.6	0.93	98%	98%	0.09	0.99	48	44	N/A	N/A	14	13	N/A
First Room 1	Living Room	W1_01 →	27.9	25.8	2.1	0.92											
	Living Room	W1_02 →	27.6	25.5	2.0	0.93	96%	95%	0.17	0.99	51	46	N/A	N/A	17	14	N/A
Room 2	Living Room	W1_03 →	27.1	25.2	1.9	0.93	98%	97%	0.14	0.99	50	46	N/A	N/A	16	14	N/A
SeconRoom 1	Living Room	W2_01 →	29.9	27.7	N/A	N/A	97%	92%	0.66	0.94	52	49	N/A	N/A	17	17	N/A
Room 2	Living Room	W2_02 →	29.4	27.2	N/A	N/A	98%	85%	1.36	0.87	51	49	N/A	N/A	17	17	N/A
26 Priory Terra	ice																
asemeRoom 1	Living Room	WB_01 →	21.2	20.2	1.0	0.95	75%	56%	2.66	0.76	43	39	N/A	N/A	13	12	N/A
Room 2	Living Room	WB_02 →	21.0	20.0	0.9	0.95	61%	45%	1.28	0.73	41	38	N/A	N/A	12	12	N/A
Groun(Room 1	Living Room	WG_01 →	23.7	22.2	1.5	0.94	89%	76%	1.51	0.86	47	43	N/A	N/A	14	14	N/A
Room 2	Living Room	WG_02 <del>→</del>	23.2	21.9	1.3	0.94	98%	83%	1.54	0.85	44	43	N/A	N/A	14	14	N/A
First Room 1	Living Room	W1_01 →	26.4	24.7	1.8	0.93	95%	87%	0.91	0.92	52	46	N/A	N/A	17	16	N/A
Room 2	Living Room	W1_02 →	25.9	24.3	1.6	0.94											
	Living Room	W1_03 →	25.7	24.3	1.4	0.94	94%	81%	1.36	0.86	49	45	N/A	N/A	15	15	N/A
SeconiRoom 1	Living Room	W2_01 →	28.7	26.7	2.0	0.93	94%	79%	1.88	0.84	52	50	N/A	N/A	17	17	N/A
Room 2	Living Room	W2_02 →	28.0	26.3	1.6	0.94	94%	77%	1.57	0.83	51	48	N/A	N/A	17	17	N/A
28 Priory Terra	ice																
asemeRoom 1	Living Room	WB_01 →	20.8	19.9	0.9	0.96	80%	61%	1.45	0.76	41	35	N/A	N/A	12	10	N/A
Room 2	Living Room	WB_02 →	20.2	19.0	1.1	0.94	78%	56%	3.35	0.71	40	35	N/A	N/A	12	10	N/A
Groun(Room 1	Living Room	WG_01 →	22.6	21.4	1.1	0.95	79%	73%	0.55	0.93	41	39	N/A	N/A	12	12	N/A
Room 2	Living Room	WG_02 →	22.4	21.0	1.4	0.94	84%	80%	0.57	0.94	41	38	N/A	N/A	13	12	N/A
First Room 1	Living Room	W1_01 →	25.4	24.2	1.2	0.95											

Daylight / Sunlight Neighbouring Properties DELVA PATMAN REDLER

Chartered Surveyors

: Existing vs Propo	osea																
Property, roon	n & window attrib	outes		VS	SC			N:	SL				AP	SH (ro	om)		
Floor Room Ro	oom use	Window Ret./Orientatio	Exis. (% VSC)	Prop. (% VSC)	Loss (% VSC)	Pro./Ex . ratio	Exis. (% rm)	Prop. (% rm)	Loss (m²)	Pro./E x. ratio	Exis.	Annual ( Prop.		<i>l)</i> Pro./Ex		ter <i>(%A</i> Prop.	<i>PSH)</i> Pro./Ex
	Living Room	W1_02 →	24.9	23.7	1.2	0.95	97%	95%	0.15	0.99	45	44	N/A	N/A	15	15	N/A
Room 2	Living Room	W1_03 →	24.8	23.5	1.3	0.95	88%	91%	-0.45	1.04	43	44	N/A	1.02	15	15	N/A
SeconRoom 3	Living Room	W2_01 →	27.4	26.1	1.3	0.95	97%	89%	0.73	0.92	47	46	N/A	N/A	15	15	N/A
Room 4	Living Room	W2_02 →	27.0	25.7	1.3	0.95	87%	85%	0.18	0.98	44	46	N/A	1.05	15	15	N/A
30 Priory Terra	асе																
asemeadroom	Bedroom	WB_01 →	20.4	18.5	1.9	0.91	71%	42%	3.89	0.59	N/R	N/R	N/R	N/R	N/R	N/R	N/R
edroom	Bedroom	WB_02 →	20.3	18.3	2.1	0.90	77%	59%	1.33	0.76	N/R	N/R	N/R	N/R	N/R	N/R	N/R
Grounedroom	Bedroom	WG_01 →	22.6	20.5	2.0	0.91	70%	63%	0.87	0.90	N/R	N/R	N/R	N/R	N/R	N/R	N/R
edroom	Bedroom	WG_02 →	22.1	20.0	2.0	0.91	91%	90%	0.09	0.99	N/R	N/R	N/R	N/R	N/R	N/R	N/R
First Room 1	Living Room	W1_01 →	24.9	23.1	1.7	0.93	79%	77%	0.32	0.96	45	46	N/A	1.02	17	17	N/A
Room 2	Living Room	W1_02 →	24.4	22.7	1.7	0.93											
	Living Room	W1_03 →	24.3	22.5	1.8	0.93	82%	64%	1.99	0.78	44	45	N/A	1.02	17	17	N/A
SeconRoom 1	Living Room	W2_01 →	26.9	25.4	1.5	0.94	78%	72%	0.67	0.92	46	49	N/A	1.07	17	17	N/A
Room 2	Living Room	W2_02 →	26.4	24.9	1.5	0.94	75%	70%	0.60	0.93	45	48	N/A	1.07	17	17	N/A
32 Priory Terra	ace																
asemeRoom 1	Living Room	WB_01 →	20.1	18.0	2.1	0.89	56%	44%	0.97	0.79	38	34	N/A	N/A	14	11	N/A
Room 2	Living Room	WB_02 →	19.5	17.4	2.1	0.89	87%	56%	4.33	0.65	36	33	N/A	N/A	15	11	N/A
Groun(Room 1	Living Room	WG_01 →	21.6	19.6	2.0	0.91	82%	73%	1.08	0.88	40	35	N/A	N/A	16	12	N/A
Room 2	Living Room	WG_02 →	21.4	19.5	1.9	0.91	83%	76%	0.85	0.91	41	37	N/A	N/A	17	14	N/A
First Room 1	Living Room	W1_01 →	24.2	22.6	1.7	0.93											
	Living Room	W1_02 →	23.7	22.1	1.6	0.93	83%	69%	1.64	0.83	43	44	N/A	1.02	17	17	N/A
Room 2	Living Room	W1_03 →	23.7	22.1	1.5	0.94	79%	62%	1.86	0.78	44	40	N/A	N/A	17	16	N/A
SeconRoom 1	Living Room	W2_01 →	26.1	24.8	1.4	0.95	78%	73%	0.57	0.94	45	46	N/A	1.02	17	17	N/A
Room 2	Living Room	W2_02 →	25.8	24.5	1.2	0.95	83%	71%	1.32	0.85	48	46	N/A	N/A	17	17	N/A
34 Priory Terra	ace																
	iory Terrace																

Daylight / Sunlight Neighbouring Properties DELVA PATMAN REDLER

Chartered Surveyors

Property, roon	n & window attrib	utes		VS	SC			NS	SL				AF	SH (roc	om)		
Floor Room Ro	oom use	Window Ret./Orientatio n	Exis. (% VSC)	Prop. (% VSC)	Loss (% VSC)	Pro./Ex . ratio	Exis. (% rm)	Prop. (% rm)	Loss (m²)	Pro./E x. ratio	Exis.	Annual ( Prop.		<i>l)</i> Pro./Ex	Win	ter <i>(%A.</i> Prop.	<i>PSH)</i> Pro./Ex
asemeRoom 1	Living Room	WB_01 →	19.7	17.3	2.4	0.88	89%	62%	2.96	0.70	38	34	N/A	N/A	13	12	N/A
Room 2	Living Room	WB_02 →	20.1	16.9	3.2	0.84	91%	57%	2.98	0.62	41	35	N/A	N/A	13	12	N/A
Groun@oom 1	Living Room	WG_01 →	22.0	19.6	2.4	0.89											
	Living Room	WG_02 →	22.1	19.0	3.1	0.86	98%	92%	1.16	0.95	49	40	N/A	N/A	16	14	N/A
First Room 1	Living Room	W1_01 →	24.2	22.4	1.9	0.92	80%	64%	2.76	0.79	46	41	N/A	N/A	15	15	N/A
Room 2	Bedroom	W1_02 →	24.4	21.9	2.5	0.90											
	Bedroom	W1_03 →	24.4	21.6	2.9	0.88	95%	95%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
Secon@oom 1	Living Room	W2_01 →	26.3	24.8	1.5	0.94	88%	72%	1.89	0.81	50	49	N/A	N/A	15	17	1.13
Room 2	Living Room	W2_02 →	26.3	24.0	2.2	0.91	92%	71%	2.32	0.77	52	48	N/A	N/A	16	15	N/A
36 Priory Terra	асе																
asemeRoom 1	Living Room	WB_01 →	19.9	15.8	4.1	0.79	89%	41%	4.00	0.46	44	32	N/A	N/A	14	12	N/A
Room 2	Living Room	WB_02 →	18.0	13.8	4.2	0.77	90%	75%	2.20	0.83	39	32	N/A	N/A	12	13	1.08
Groun@oom 1	Living Room	WG_01 →	21.0	16.8	4.1	0.80	92%	76%	1.85	0.82	48	37	N/A	N/A	16	14	N/A
Room 2	Living Room	WG_02 →	19.6	15.4	4.2	0.79	96%	80%	1.88	0.83	44	40	N/A	N/A	14	14	N/A
First Room 1	Living Room	W1_01 →	23.1	19.6	3.5	0.85	93%	75%	1.99	0.81	51	43	N/A	N/A	16	14	N/A
Room 2	Living Room	W1_02 →	21.3	17.7	3.5	0.83	95%	80%	1.76	0.84	48	44	N/A	N/A	15	14	N/A
SeconRoom 1	Living Room	W2_01 →	25.8	23.0	2.8	0.89	95%	76%	2.25	0.79	52	47	N/A	N/A	16	15	N/A
Room 2	Living Room	W2_02 →	23.8	21.0	2.8	0.88	96%	84%	1.41	0.87	49	46	N/A	N/A	15	14	N/A
143 Abbey Roa	ad																
3roun(Kitcher	Kitchen	WG_04 →	17.7	15.3	2.4	0.86	88%	88%	0.02	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
ing Ro	Living Room	WG_01 →	17.6	13.8	3.8	0.79											
	Living Room	WG_02 →	16.8	13.4	3.4	0.80											
	Living Room	WG_03 →	14.9	11.9	3.0	0.80	98%	98%	0.00	1.00	40	32	N/A	N/A	11	11	N/A
First Kitcher	Kitchen	W1_04 →	22.2	19.9	2.3	0.90	89%	89%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
ing Ro	Living Room	W1_01 →	19.7	15.7	3.9	0.80											
	Living Room	W1_02 →	18.7	15.2	3.5	0.81											

Date: 12/04/2022 Scheme: SR\_08/04/2022 Scenario: Existing Vs Proposed



Property, roon	n & window attribu	tes		VS	SC			NS	SL				AP	SH (roc	m)		
Floor Room Ro	nom uso	Window	Exis. (%	Prop. <i>(%</i>	Loss (%	Pro./Ex	Exis.	Prop.	Loss	Pro./E	,	Annual (	(%APSH	d)	Wint	ter (%AF	PSH)
FIOOI KOOIII KO	Join use	Ref./Orientatio n	VSC)	VSC)	(% VSC)	. ratio	(% rm)	(% rm)	(m <sup>2</sup> )	x. ratio	Exis.	Prop.	Loss	Pro./Ex	Exis.	Prop.	Pro./Ex
	Living Room	W1_03 →	16.5	13.4	3.1	0.81	98%	98%	0.00	1.00	43	39	N/A	N/A	13	13	N/A
3econ∉Kitcher	Kitchen	W2_02 →	23.5	21.6	1.9	0.92	87%	87%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
ing Ro	Living Room	W2_01 →	20.2	17.3	2.9	0.86	95%	93%	0.35	0.98	45	40	N/A	N/A	13	12	N/A
Third Kitcher	Kitchen	W3_02 →	24.8	23.3	1.5	0.94	86%	86%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
ing Ro	Living Room	W3_01 →	22.1	19.9	2.3	0.90	95%	93%	0.46	0.98	49	44	N/A	N/A	16	12	N/A
Fourthhen_Li	Kitchen	W4_01 →	29.1	28.1	N/A	N/A	100%	100%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
126 Abbey Roa	ad																
asemeing Ro	Living Room	WB_01 <u></u> ∠	24.6	24.8	-0.2	1.01	97%	97%	0.00	1.00	45	45	N/A	N/A	13	13	N/A
3roun@edroor	Bedroom	WG_01 <u></u> ∠	28.2	28.4	N/A	1.01	99%	99%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
edroom	Bedroom	WG_02 <u></u> ✓	25.0	24.9	0.1	1.00											
	Bedroom	WG_03 <u></u> ∠	25.5	25.7	-0.2	1.01											
	Bedroom	WG_04 <u></u> ∠	13.4	13.4	0.0	1.00	99%	99%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
First Kitcher	Kitchen	W1_02 <u></u> ∠	34.3	34.2	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
ing Ro	Living Room	W1_01 <b>∠</b>	33.8	33.8	N/A	N/A	98%	98%	0.00	1.00	72	71	N/A	N/A	24	23	N/A
Secon/Kitcher	Kitchen	W2_02 <u></u> ∠	36.5	36.4	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
ing Ro	Living Room	W2_01 <u></u> ∠	36.3	36.2	N/A	N/A	99%	99%	0.00	1.00	74	74	N/A	N/A	26	26	N/A
124 Abbey Roa																	
asemeing Ro	Living Room	WB_01 <u>∠</u>	23.8	24.0	-0.2	1.01	97%	97%	0.00	1.00	41	42	N/A	1.02	9	10	1.11
3roun&edroor	Bedroom	WG_01 ∠	27.5	27.8	N/A	1.01	99%	99%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
edroom	Bedroom	WG_02 <u></u> ∠	23.9	23.7	0.2	0.99											
	Bedroom	WG_03 <u></u> ∠	24.2	24.5	-0.2	1.01											
	Bedroom	WG_04 <u></u> ∠	11.3	11.4	0.0	1.00	100%	100%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
First ledroor	Bedroom	W1_01 ∠	34.2	34.0	N/A	N/A	99%	99%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
Room 1	Bedroom	W1_02 <u></u> ✓	34.0	33.8	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
Secondedroor	Bedroom	W2_01 ∠	36.4	36.2	N/A	N/A	99%	99%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
Room 1	Bedroom	W2_02 <u></u> ✓	36.2	36.0	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R

Date: 12/04/2022 Scheme: SR\_08/04/2022

Scenario: Existing Vs Proposed



Prope	rty, roon	n & window attribut	tes			VS	SC			NS	SL				AP	SH (roc	om)		
Floor	Room Ro	oom uso		ndow	Exis.	Prop.	Loss	Pro./Ex	Exis.	Prop.	Loss	Pro./E	P	Annual (	(%APSH	<i>d)</i>	Wint	ter (%Ai	PSH)
FIOOI	KUUIII K	Join use	Ref./O	rientatio n	(% VSC)	(% VSC)	(% VSC)	. ratio	(% rm)	(% rm)	(m <sup>2</sup> )	x. ratio	Exis.	Prop.	Loss	Pro./Ex	Exis.	Prop.	Pro./Ex
Flat 1	to 102 S	nowman House																	
Third	R1	Bedroom	W1	$\leftarrow$	37.3	37.0	N/A	N/A											
		Bedroom	W2	$\downarrow$	31.8	27.6	N/A	N/A	99%	99%	0.03	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R2	Bedroom	W3	$\downarrow$	31.7	27.1	N/A	N/A	89%	55%	4.50	0.61	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R3	Bedroom	W4	$\downarrow$	31.6	26.9	4.7	0.85	90%	53%	3.90	0.58	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R5	Bedroom	W6	$\downarrow$	31.4	26.5	4.9	0.84	97%	52%	4.81	0.54	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R6	Bedroom	W7	$\downarrow$	31.3	26.3	4.9	0.84	96%	55%	5.40	0.57	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R7	Bedroom	W8	$\downarrow$	31.1	26.2	4.9	0.84											
		Bedroom	W9	$\rightarrow$	28.9	28.6	N/A	N/A	100%	99%	0.18	0.99	N/R	N/R	N/R	N/R	N/R	N/R	N/R
Fourth	R1	Bedroom	W1	$\leftarrow$	38.4	38.1	N/A	N/A											
		Bedroom	W2	$\downarrow$	33.3	29.6	N/A	N/A	100%	99%	0.16	0.99	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R2	Bedroom	W3	$\downarrow$	33.2	29.0	N/A	N/A	98%	67%	4.17	0.68	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R3	Bedroom	W4	$\downarrow$	33.1	28.7	N/A	N/A	98%	64%	3.49	0.65	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R5	Bedroom	W6	$\downarrow$	32.8	28.2	N/A	N/A	97%	57%	4.25	0.59	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R6	Bedroom	W7	$\downarrow$	32.7	28.1	N/A	N/A	97%	61%	4.70	0.63	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R7	Bedroom	W8	$\downarrow$	32.5	27.9	N/A	N/A											
		Bedroom	W9	$\rightarrow$	29.4	29.2	N/A	N/A	100%	99%	0.23	0.99	N/R	N/R	N/R	N/R	N/R	N/R	N/R
Fifth	R1	Bedroom	W1	$\leftarrow$	39.0	38.8	N/A	N/A											
		Bedroom	W2	$\downarrow$	34.7	31.3	N/A	N/A	100%	99%	0.13	0.99	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R2	Bedroom	W3	$\downarrow$	34.5	30.9	N/A	N/A	98%	86%	1.62	0.87	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R3	Bedroom	W4	$\downarrow$	34.4	30.5	N/A	N/A	98%	78%	2.04	0.80	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R5	Bedroom	W6	$\downarrow$	34.2	30.0	N/A	N/A	97%	64%	3.50	0.66	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R6	Bedroom	W7	$\downarrow$	34.0	29.8	N/A	N/A	97%	68%	3.82	0.70	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R7	Bedroom	W8	$\downarrow$	33.8	29.5	N/A	N/A											
		Bedroom	W9	$\rightarrow$	29.9	29.7	N/A	N/A	100%	99%	0.20	0.99	N/R	N/R	N/R	N/R	N/R	N/R	N/R
Sixth	R1	Bedroom	W1	$\leftarrow$	39.3	39.2	N/A	N/A											
		Bedroom	W2	$\downarrow$	35.9	33.1	N/A	N/A	100%	99%	0.12	0.99	N/R	N/R	N/R	N/R	N/R	N/R	N/R

Date: 12/04/2022

Scheme: SR\_08/04/2022 Scenario: Existing Vs Proposed



Prope	rty, roon	n & window attribut	es			VS	SC			NS	SL				AP	SH (roc	om)		
Floor	Room Ro	nom use		idow	Exis. (%	Prop. (%	Loss (%	Pro./Ex	Exis.	Prop.	Loss	Pro./E	F	\nnual (	%APSF	<del>1</del> )	Wint	er (%Al	PSH)
1 1001	rtoom rte	Join use	Ref./O	rientatio n	VSC)	VSC)	VSC)	. ratio	(% rm)	(% rm)	(m <sup>2</sup> )	x. ratio	Exis.	Prop.	Loss	Pro./Ex	Exis.	Prop.	Pro./Ex
	R2	Bedroom	W3	$\downarrow$	35.8	32.7	N/A	N/A	98%	91%	0.93	0.93	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R3	Bedroom	W4	$\downarrow$	35.7	32.3	N/A	N/A	98%	86%	1.24	0.88	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R5	Bedroom	W6	$\downarrow$	35.5	31.7	N/A	N/A	97%	75%	2.36	0.77	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R6	Bedroom	W7	$\downarrow$	35.3	31.5	N/A	N/A	97%	78%	2.51	0.80	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R7	Bedroom	W8	$\downarrow$	35.1	31.2	N/A	N/A											
		Bedroom	W9	$\rightarrow$	30.4	30.1	N/A	N/A	100%	99%	0.17	0.99	N/R	N/R	N/R	N/R	N/R	N/R	N/R
Sevent	R1	Bedroom	W1	$\leftarrow$	39.4	39.4	N/A	N/A											
		Bedroom	W2	$\downarrow$	37.1	34.8	N/A	N/A	100%	99%	0.11	0.99	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R2	Bedroom	W3	$\downarrow$	37.0	34.4	N/A	N/A	98%	97%	0.21	0.98	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R3	Bedroom	W4	$\downarrow$	36.9	34.1	N/A	N/A	98%	94%	0.37	0.96	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R5	Bedroom	W6	$\downarrow$	36.7	33.4	N/A	N/A	97%	90%	0.72	0.93	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R6	Bedroom	W7	$\downarrow$	36.5	33.1	N/A	N/A	97%	93%	0.53	0.96	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R7	Bedroom	W8	$\downarrow$	36.2	32.8	N/A	N/A											
		Bedroom	W9	$\rightarrow$	30.8	30.6	N/A	N/A	100%	99%	0.14	0.99	N/R	N/R	N/R	N/R	N/R	N/R	N/R
Eighth	R1	Bedroom	W1	$\leftarrow$	39.5	39.5	N/A	N/A											
		Bedroom	W2	$\downarrow$	37.9	36.2	N/A	N/A	100%	100%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R2	Bedroom	W3	$\downarrow$	37.8	35.9	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R3	Bedroom	W4	$\downarrow$	37.7	35.6	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R5	Bedroom	W6	$\downarrow$	37.4	34.9	N/A	N/A	97%	97%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R6	Bedroom	W7	$\downarrow$	37.2	34.6	N/A	N/A	97%	97%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R7	Bedroom	W8	$\downarrow$	37.0	34.3	N/A	N/A											
		Bedroom	W9	$\rightarrow$	31.3	31.1	N/A	N/A	100%	100%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
Ninth	R1	Bedroom	W1	$\leftarrow$	39.5	39.6	N/A	1.00											
		Bedroom	W2	$\downarrow$	38.2	37.0	N/A	N/A	100%	100%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R2	Bedroom	W3	$\downarrow$	38.1	36.8	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R3	Bedroom	W4	$\downarrow$	38.0	36.5	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R5	Bedroom	W6	$\downarrow$	37.7	36.0	N/A	N/A	97%	97%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R6	Bedroom	W7	$\downarrow$	37.6	35.7	N/A	N/A	97%	97%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R

Date: 12/04/2022 Scheme: SR\_08/04/2022 Scenario: Existing Vs Proposed



Prope	rty, roor	n & window attribut	es			V	SC			NS	SL .				AP	SH (roc	om)		
Floor	Room R	nom usa		ndow	Exis. (%	Prop. <i>(%</i>	Loss (%	Pro./Ex		Prop.	Loss	Pro./E	F	Annual (	′%APSF	<del>1</del> )	Wint	er (%A	PSH)
1 1001	IXOOIII IX	Join use	Ref./O	rientatio n	VSC)	VSC)	VSC)	. ratio	(% rm)	(% rm)	(m <sup>2</sup> )	x. ratio	Exis.	Prop.	Loss	Pro./Ex	Exis.	Prop.	Pro./Ex
	R7	Bedroom	W8	$\downarrow$	37.3	35.4	N/A	N/A											
		Bedroom	W9	$\rightarrow$	31.8	31.6	N/A	N/A	100%	100%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
Tenth	R1	Bedroom	W1	$\leftarrow$	39.6	39.6	N/A	N/A											
		Bedroom	W2	$\downarrow$	38.5	37.8	N/A	N/A	100%	100%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R2	Bedroom	W3	$\downarrow$	38.4	37.6	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R3	Bedroom	W4	$\downarrow$	38.4	37.4	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R5	Bedroom	W6	$\downarrow$	38.1	36.9	N/A	N/A	97%	97%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R6	Bedroom	W7	$\downarrow$	37.9	36.7	N/A	N/A	97%	97%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R7	Bedroom	W8	$\downarrow$	37.7	36.4	N/A	N/A											
		Bedroom	W9	$\rightarrow$	32.3	32.2	N/A	N/A	100%	100%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
levent	R1	Bedroom	W1	$\leftarrow$	39.6	39.6	N/A	N/A											
		Bedroom	W2	$\downarrow$	38.8	38.4	N/A	N/A	100%	100%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R2	Bedroom	W3	$\downarrow$	38.7	38.3	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R3	Bedroom	W4	$\downarrow$	38.6	38.1	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R5	Bedroom	W6	$\downarrow$	38.3	37.8	N/A	N/A	97%	97%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R6	Bedroom	W7	$\downarrow$	38.2	37.6	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R7	Bedroom	W8	$\downarrow$	38.0	37.3	N/A	N/A											
		Bedroom	W9	$\rightarrow$	32.9	32.8	N/A	N/A	100%	100%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
Twelfh	R1	Bedroom	W1	$\leftarrow$	39.6	39.6	N/A	N/A											
		Bedroom	W2	$\downarrow$	38.9	38.7	N/A	N/A	100%	100%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R2	Bedroom	W3	$\downarrow$	38.9	38.6	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R3	Bedroom	W4	$\downarrow$	38.8	38.5	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R5	Bedroom	W6	$\downarrow$	38.5	38.2	N/A	N/A	97%	97%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R6	Bedroom	W7	$\downarrow$	38.4	38.1	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R7	Bedroom	W8	$\downarrow$	38.2	37.8	N/A	N/A											
		Bedroom	W9	$\rightarrow$	33.5	33.4	N/A	N/A	100%	100%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
nirteen	R1	Bedroom	W1	$\leftarrow$	39.6	39.6	N/A	N/A											
		Bedroom	W2	$\downarrow$	39.1	39.0	N/A	N/A	100%	100%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R

Date: 12/04/2022 Scheme: SR\_08/04/2022 Scenario: Existing Vs Proposed



Prope	rty, roon	n & window attribut	es			VS	SC			NS	SL				AF	SH (roo	m)		
Floor	Room Ro	nom use		idow	Exis. (%	Prop. (%	Loss (%	Pro./Ex	Exis.	Prop.	Loss	Pro./E	A	Annual (	%APSH	1)	Wint	ter (%AF	PSH)
1 1001	NOOHI IX	Join use	Ref./O	rientatio n	VSC)	VSC)	VSC)	. ratio	(% rm)	(% rm)	(m <sup>2</sup> )	x. ratio	Exis.	Prop.	Loss	Pro./Ex	Exis.	Prop.	Pro./Ex
	R2	Bedroom	W3	$\downarrow$	39.0	39.0	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R3	Bedroom	W4	$\downarrow$	38.9	38.9	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R5	Bedroom	W6	$\downarrow$	38.7	38.7	N/A	N/A	97%	97%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R6	Bedroom	W7	$\downarrow$	38.6	38.5	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R7	Bedroom	W8	$\downarrow$	38.4	38.3	N/A	N/A											
		Bedroom	W9	$\rightarrow$	34.1	34.1	N/A	N/A	100%	100%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
urteer	R1	Bedroom	W1	$\leftarrow$	39.6	39.6	N/A	N/A											
		Bedroom	W2	$\downarrow$	39.2	39.2	N/A	N/A	100%	100%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R2	Bedroom	W3	$\downarrow$	39.1	39.1	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R3	Bedroom	W4	$\downarrow$	39.1	39.1	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R5	Bedroom	W6	$\downarrow$	38.9	38.9	N/A	N/A	97%	97%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R6	Bedroom	W7	$\downarrow$	38.7	38.7	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R7	Bedroom	W8	$\downarrow$	38.6	38.6	N/A	N/A											
		Bedroom	W9	$\rightarrow$	34.8	34.8	N/A	N/A	100%	100%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
ifteent	R1	Bedroom	W1	$\leftarrow$	39.6	39.6	N/A	N/A											
		Bedroom	W2	$\downarrow$	39.3	39.3	N/A	N/A	100%	100%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R2	Bedroom	W3	$\downarrow$	39.2	39.2	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R3	Bedroom	W4	$\downarrow$	39.2	39.2	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R5	Bedroom	W6	$\downarrow$	39.0	39.0	N/A	N/A	97%	97%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R6	Bedroom	W7	$\downarrow$	38.9	38.9	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R7	Bedroom	W8	$\downarrow$	38.8	38.8	N/A	N/A											
		Bedroom	W9	$\rightarrow$	35.5	35.5	N/A	N/A	100%	100%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
ixteen	R1	Bedroom	W1	$\leftarrow$	39.6	39.6	N/A	N/A											
		Bedroom	W2	$\downarrow$	39.4	39.4	N/A	N/A	100%	100%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R2	Bedroom	W3	$\downarrow$	39.3	39.3	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R3	Bedroom	W4	$\downarrow$	39.3	39.3	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R5	Bedroom	W6	$\downarrow$	39.2	39.2	N/A	N/A	97%	97%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R6	Bedroom	W7	$\downarrow$	39.1	39.1	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R

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Scenario: Existing Vs Proposed



Prope	rty, roor	n & window attribu	tes			V	SC			N:	SL				AP	SH (ro	om)		
Floor F	Room R	oom use		ndow	Exis.	Prop. <i>(%</i>	Loss (%	Pro./Ex	Exis.	Prop.	Loss	Pro./E	/	Annual	(%APSH	<i>(</i> )	Win	er (%A	PSH)
1 1001 1	NOOIII IN	oom use	Ref./O	rientatio n	VSC)	VSC)	VSC)	. ratio	(% rm)	(% rm)	(m <sup>2</sup> )	x. ratio	Exis.	Prop.	Loss	Pro./Ex	Exis.	Prop.	Pro./E>
	R7	Bedroom	W8	$\downarrow$	39.0	39.0	N/A	N/A											
		Bedroom	W9	$\rightarrow$	36.2	36.2	N/A	N/A	100%	100%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
/entee	R1	Bedroom	W1	$\leftarrow$	39.6	39.6	N/A	N/A											
		Bedroom	W2	$\downarrow$	39.4	39.4	N/A	N/A	100%	100%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R2	Bedroom	W3	$\downarrow$	39.4	39.4	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R3	Bedroom	W4	$\downarrow$	39.4	39.4	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R5	Bedroom	W6	$\downarrow$	39.3	39.3	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R6	Bedroom	W7	$\downarrow$	39.2	39.2	N/A	N/A	99%	99%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R7	Bedroom	W8	$\downarrow$	39.1	39.1	N/A	N/A											
		Bedroom	W9	$\rightarrow$	36.9	36.9	N/A	N/A	100%	100%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
ghteer	R1	Bedroom	W1	<b>←</b>	39.6	39.6	N/A	N/A											
		Bedroom	W2	<b>↓</b>	39.5	39.5	N/A	N/A	100%	100%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R2	Bedroom	W3	<b>↓</b>	39.5	39.5	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R3	Bedroom	W4	<b>↓</b>	39.4	39.4	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R5	Bedroom	W6	<b>V</b>	39.4	39.4	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R6	Bedroom	W7	<u> </u>	39.3	39.3	N/A	N/A	99%	99%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R7	Bedroom	W8	<b>V</b>	39.2	39.2	N/A	N/A	4000/	4.000/	0.00	4.00	N/D	NI/D	NI/D	NI/D	N/D	NI/D	NI/D
4	R1	Bedroom	W9	$\rightarrow$	37.6	37.6	N/A N/A	N/A N/A	100%	100%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
neteer	ΚI	Bedroom Bedroom	W1 W2	<u>←</u>	39.6	39.6 39.5	N/A	N/A N/A	100%	100%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R2	Bedroom	W3	$\downarrow$	39.5	39.5	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R3	Bedroom	W4	$\downarrow$	39.5	39.5	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R5	Bedroom	W4	$\downarrow$	39.4	39.4	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R6	Bedroom	W7	$\downarrow$	39.4	39.4	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R7	Bedroom	W8	$\downarrow$	39.4	39.4	N/A	N/A	3070	3070	0.00	1.00	14/14	14/14	14/13	14/13	14/14	14/13	14/11
		Bedroom	W9	$\rightarrow$	38.2	38.2	N/A	N/A	100%	100%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
		200.00111	****		00.2	00.2	14//1	14//1	10070	10070	0.00	1.00	14/11	14/13	14/11	1 4/11	14/11	14/11	14/11
Flat 1	1 to 102 Casterbridge																		
. lut i	.5 .02	- actor bridge																	

Date: 12/04/2022 Scheme: SR\_08/04/2022

Scenario: Existing Vs Proposed



Property, roo	om & window attribut	es			VS	SC			NS	SL				AF	SH (roc	om)		
Floor Room	Room use		idow	Exis. (%	Prop. <i>(%</i>	Loss (%	Pro./Ex	Exis.	Prop.	Loss	Pro./E	F	Annual (	%APSF	1)	Wint	er (%AF	PSH)
		Rei./O	rientatio n	VSC)	VSC)	VSC)	. ratio	(% rm)	(% rm)	(m <sup>2</sup> )	x. ratio	Exis.	Prop.	Loss	Pro./Ex	Exis.	Prop.	Pro./Ex
Third R1	Living Room	W1	$\uparrow$	37.0	37.0	N/A	N/A											
	Living Room	W2	$\leftarrow$	28.1	26.4	1.7	0.94											
	Living Room	W3	$\leftarrow$	28.6	26.7	1.9	0.93	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R2	Kitchen	W4	$\leftarrow$	5.3	4.4	8.0	0.84	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R3	Bedroom	W5	$\leftarrow$	28.7	26.6	2.1	0.93	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R4	Bedroom	W6	$\leftarrow$	28.9	26.5	2.4	0.92	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R5	Kitchen	W7	$\leftarrow$	5.6	4.2	1.4	0.75	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R6	Kitchen	W8	$\leftarrow$	5.8	4.2	1.5	0.74	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R7	Living Room	W9	$\leftarrow$	29.3	26.4	2.8	0.90											
	Living Room	W10	$\leftarrow$	29.5	26.4	3.1	0.90											
	Living Room	W11	$\downarrow$	32.0	29.2	N/A	N/A	100%	100%	0.00	1.00	82	75	N/A	N/A	23	18	N/A
R8	Bedroom	W12	$\downarrow$	32.4	30.0	N/A	N/A	91%	91%	0.06	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
R9	Bedroom	W13	$\downarrow$	32.7	30.6	N/A	N/A	84%	84%	0.05	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
R10	Bedroom	W14	$\downarrow$	33.4	31.8	N/A	N/A	91%	91%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
R11	Bedroom	W15	$\downarrow$	33.7	32.2	N/A	N/A	99%	99%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
R12	Living Room	W16	$\downarrow$	34.0	32.7	N/A	N/A											
	Living Room	W17	$\rightarrow$	38.0	38.0	N/A	N/A											
	Living Room	W18	$\rightarrow$	38.0	38.0	N/A	N/A	100%	100%	0.00	1.00	93	93	N/A	N/A	26	26	N/A
Fourth R1	Living Room	W1	$\uparrow$	37.7	37.7	N/A	N/A											
	Living Room	W2	$\leftarrow$	29.0	27.4	N/A	N/A											
	Living Room	W3	$\leftarrow$	29.4	27.7	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R2	Kitchen	W4	$\leftarrow$	5.6	4.8	0.7	0.87	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R3	Bedroom	W5	$\leftarrow$	29.6	27.6	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R4	Bedroom	W6	$\leftarrow$	29.8	27.6	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R5	Kitchen	W7	$\leftarrow$	6.0	4.7	1.2	0.79	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R6	Kitchen	W8	$\leftarrow$	6.2	4.8	1.4	0.77	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R7	Living Room	W9	$\leftarrow$	30.3	27.6	N/A	N/A											
	Living Room	W10	$\leftarrow$	30.5	27.5	N/A	N/A											

Date: 12/04/2022 Scheme: SR\_08/04/2022 Scenario: Existing Vs Proposed



Prope	rty, rooi	m & window attribut	es			V	SC			NS	SL				AP	SH (roc	m)		
Floor	Poom P	oom use		dow	Exis. (%	Prop. <i>(%</i>	Loss (%	Pro./Ex	Exis.	Prop.	Loss	Pro./E	F	Annual (	%APSH	<i>(</i> )	Wint	er (%AF	PSH)
FIOOI	NOOIII N	oom use	Ref./Or	rientatio n	VSC)	VSC)	VSC)	. ratio	(% rm)	(% rm)	(m <sup>2</sup> )	x. ratio	Exis.	Prop.	Loss	Pro./Ex	Exis.	Prop.	Pro./Ex
		Living Room	W11	$\downarrow$	33.2	30.3	N/A	N/A	100%	100%	0.00	1.00	83	77	N/A	N/A	24	19	N/A
	R8	Bedroom	W12	$\downarrow$	33.5	31.1	N/A	N/A	92%	92%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R9	Bedroom	W13	$\downarrow$	33.8	31.6	N/A	N/A	84%	84%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R10	Bedroom	W14	$\downarrow$	34.4	32.8	N/A	N/A	91%	91%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R11	Bedroom	W15	$\downarrow$	34.6	33.2	N/A	N/A	99%	99%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R12	Living Room	W16	$\downarrow$	34.8	33.6	N/A	N/A											
		Living Room	W17	$\rightarrow$	38.5	38.5	N/A	N/A											
		Living Room	W18	$\rightarrow$	38.5	38.5	N/A	N/A	100%	100%	0.00	1.00	94	94	N/A	N/A	27	27	N/A
Fifth	R1	Living Room	W1	$\uparrow$	38.0	38.0	N/A	N/A											
		Living Room	W2	$\leftarrow$	29.7	28.3	N/A	N/A											
		Living Room	W3	$\leftarrow$	30.2	28.6	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Kitchen	W4	$\leftarrow$	5.8	5.2	0.6	0.89	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R3	Bedroom	W5	$\leftarrow$	30.4	28.6	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R4	Bedroom	W6	$\leftarrow$	30.7	28.6	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R5	Kitchen	W7	$\leftarrow$	6.3	5.2	1.1	0.83	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R6	Kitchen	W8	$\leftarrow$	6.5	5.3	1.2	0.81	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R7	Living Room	W9	$\leftarrow$	31.3	28.7	N/A	N/A											
		Living Room	W10	$\leftarrow$	31.5	28.7	N/A	N/A											
		Living Room	W11	$\downarrow$	34.3	31.5	N/A	N/A	100%	100%	0.00	1.00	84	80	N/A	N/A	25	21	N/A
	R8	Bedroom	W12	$\downarrow$	34.5	32.1	N/A	N/A	92%	92%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R9	Bedroom	W13	$\downarrow$	34.8	32.6	N/A	N/A	84%	84%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R10	Bedroom	W14	$\downarrow$	35.2	33.7	N/A	N/A	91%	91%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R11	Bedroom	W15	$\downarrow$	35.4	34.0	N/A	N/A	99%	99%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R12	Living Room	W16	$\downarrow$	35.6	34.4	N/A	N/A											
		Living Room	W17		38.9	38.9	N/A	N/A											
		Living Room	W18	$\rightarrow$	38.9	38.9	N/A	N/A	100%	100%	0.00	1.00	95	95	N/A	N/A	28	28	N/A
Sixth	R1	Living Room	W1	$\uparrow$	38.1	38.1	N/A	N/A											
		Living Room	W2	$\leftarrow$	30.4	29.1	N/A	N/A											

Date: 12/04/2022 Scheme: SR\_08/04/2022

Scenario: Existing Vs Proposed



Floor Room   Red/Directable   Red/Dire	Proper	ty, rooi	m & window attribut	es			VS	SC			NS	SL				AP	SH (ro	om)		
	Floor F	Room R	oom use										Pro./E	F	Annual (	%APSH	f)	Wint	ter (%AF	PSH)
R2 Kitchen W4 ← 6.0 5.5 0.5 0.91 100% 100% 0.00 1.00 North North N/A N/A North North N/A R3 Bedroom W5 ← 31.2 29.5 N/A N/A 100% 100% 0.00 1.00 North North N/A N/A North North N/A R4 Bedroom W6 ← 31.4 29.5 N/A N/A 100% 100% 0.00 1.00 North North N/A N/A North North N/A R5 Kitchen W7 ← 6.5 5.6 0.9 0.86 100% 100% 0.00 1.00 North North N/A N/A North North N/A N/A R6 Kitchen W8 ← 6.8 5.8 1.1 0.85 100% 100% 0.00 1.00 North North N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	1 1001 1	100		Ref./O	nentatio n				. ratio	(% rm)	(% rm)	(m <sup>2</sup> )	x. ratio	Exis.	Prop.	Loss	Pro./Ex	Exis.	Prop.	Pro./Ex
R3 Bedroom W5 ← 31.2 29.5 N/A N/A 100% 100% 0.00 1.00 North North N/A N/A North North N/A R4 Bedroom W6 ← 31.4 29.5 N/A N/A 100% 100% 0.00 1.00 North North N/A N/A North North N/A N/A R5 Kitchen W7 ← 6.5 5.6 0.9 0.86 100% 100% 0.00 1.00 North North N/A N/A North North N/A N/A North North N/A R5 Kitchen W8 ← 32.1 29.7 N/A N/A N/A N/A N/A N/A North North N/A N/A North North N/A N/A North North N/A N/A North North N/A N/A North North N/A N/A North North N/A N/A North North N/A N/A North North N/A N/A North North N/A N/A North North N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A			Living Room	W3	$\leftarrow$	30.9	29.4	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R4 Bedroom		R2	Kitchen	W4	$\leftarrow$	6.0	5.5	0.5	0.91	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R5 Kitchen W7 ← 6.5 5.6 0.9 0.86 100% 100% 0.00 1.00 North North N/A N/A N/A North North N/A R6 Kitchen W8 ← 6.8 5.8 1.1 0.85 100% 100% 0.00 1.00 North North N/A N/A N/A North North N/A R7 Living Room W10 ← 32.4 29.8 N/A N/A Living Room W11 ↓ 35.4 32.7 N/A N/A N/A 100% 100% 0.00 1.00 North North N/A N/A N/A N/A R7 Bedroom W12 ↓ 35.6 33.2 N/A N/A 100% 100% 0.00 1.00 N/R N/R N/R N/R N/R N/R N/R N/R N/R N/R		R3	Bedroom	W5	$\leftarrow$	31.2	29.5	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R6 Kitchen W8 ← 6.8 5.8 1.1 0.85 100% 100% 0.00 1.00 North North N/A N/A N/A North North N/A R7 Living Room W9 ← 32.1 29.7 N/A N/A N/A N/A Living Room W10 ← 32.4 29.8 N/A N/A 100% 100% 0.00 1.00 86 80 N/A N/A 27 21 N/A R8 Bedroom W12 ↓ 35.6 33.2 N/A N/A 100% 100% 0.00 1.00 N/R N/R N/R N/R N/R N/R N/R N/R N/R N/R		R4	Bedroom	W6	$\leftarrow$	31.4	29.5	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R7		R5	Kitchen	W7	$\leftarrow$	6.5	5.6	0.9	0.86	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Living Room W10 ← 32.4 29.8 N/A N/A 100% 100% 0.00 1.00 86 80 N/A N/A 27 21 N/A N/A R8 Bedroom W12 ↓ 35.6 33.2 N/A N/A 92% 92% 0.00 1.00 N/R N/R N/R N/R N/R N/R N/R N/R N/R N/R		R6	Kitchen	W8	$\leftarrow$	6.8	5.8	1.1	0.85	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Living Room W11		R7	Living Room	W9	$\leftarrow$	32.1	29.7	N/A	N/A											
R8 Bedroom W12			Living Room	W10	$\leftarrow$	32.4	29.8	N/A	N/A											
R9 Bedroom W13 ↓ 35.7 33.7 N/A N/A 85% 85% 0.00 1.00 N/R N/R N/R N/R N/R N/R N/R N/R N/R N/R			Living Room	W11	$\downarrow$	35.4	32.7	N/A	N/A	100%	100%	0.00	1.00	86	80	N/A	N/A	27	21	N/A
R10 Bedroom W14 ↓ 36.1 34.6 N/A N/A 91% 91% 0.00 1.00 N/R N/R N/R N/R N/R N/R N/R N/R N/R N/R		R8	Bedroom	W12	$\downarrow$	35.6	33.2	N/A	N/A	92%	92%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
R11 Bedroom		R9	Bedroom	W13	$\downarrow$	35.7	33.7	N/A	N/A	85%	85%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
R12 Living Room W16 ↓ 36.4 35.2 N/A N/A Living Room W17 → 39.2 39.2 N/A N/A N/A Living Room W18 → 39.2 39.2 N/A N/A N/A 100% 100% 0.00 1.00 96 95 N/A N/A 29 28 N/A ievent R1 Living Room W2 ← 31.1 29.9 N/A N/A Living Room W3 ← 31.6 30.2 N/A N/A 100% 100% 0.00 1.00 North North N/A N/A North North N/A R2 Kitchen W4 ← 6.2 5.8 0.4 0.94 100% 100% 0.00 1.00 North North N/A N/A North North N/A R3 Bedroom W5 ← 31.9 30.3 N/A N/A 100% 100% 0.00 1.00 North North N/A N/A North North N/A R4 Bedroom W6 ← 32.2 30.5 N/A N/A 100% 100% 0.00 1.00 North North N/A N/A North North N/A R5 Kitchen W7 ← 6.8 6.0 0.8 0.89 100% 100% 0.00 1.00 North North N/A N/A North North N/A R6 Kitchen W8 ← 7.1 6.2 0.9 0.88 100% 100% 0.00 1.00 North North N/A N/A N/A N/A N/A N/A Living Room W10 ← 33.3 30.8 N/A N/A N/A Living Room W10 ← 33.3 30.8 N/A N/A Living Room W11 ↓ 36.4 33.8 N/A N/A N/A 100% 100% 0.00 1.00 86 82 N/A N/A 27 23 N/A		R10	Bedroom	W14	$\downarrow$	36.1	34.6	N/A	N/A	91%	91%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
Living Room W17 → 39.2 39.2 N/A N/A 100% 100% 0.00 1.00 96 95 N/A N/A 29 28 N/A sevent R1 Living Room W2 ← 31.1 29.9 N/A N/A 100% 100% 0.00 1.00 North North N/A N/A North North N/A R2 Kitchen W4 ← 6.2 5.8 0.4 0.94 100% 100% 0.00 1.00 North North N/A N/A North North N/A R4 Bedroom W6 ← 32.2 30.5 N/A N/A 100% 100% 0.00 1.00 North North N/A N/A North North N/A R5 Kitchen W7 ← 6.8 6.0 0.8 0.89 100% 100% 0.00 1.00 North North N/A N/A North North N/A R6 Kitchen W8 ← 7.1 6.2 0.9 0.88 100% 100% 0.00 1.00 North North N/A N/A N/A North North N/A N/A North North N/A N/A N/A North North N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A		R11	Bedroom	W15	$\downarrow$	36.2	34.9	N/A	N/A	99%	99%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
Living Room W18 → 39.2 39.2 N/A N/A 100% 100% 0.00 1.00 96 95 N/A N/A 29 28 N/A  ievent R1 Living Room W2 ← 31.1 29.9 N/A N/A  Living Room W3 ← 31.6 30.2 N/A N/A 100% 100% 0.00 1.00 North North N/A N/A North North N/A  R2 Kitchen W4 ← 6.2 5.8 0.4 0.94 100% 100% 0.00 1.00 North North N/A N/A North North N/A  R3 Bedroom W5 ← 31.9 30.3 N/A N/A 100% 100% 0.00 1.00 North North N/A N/A North North N/A  R4 Bedroom W6 ← 32.2 30.5 N/A N/A 100% 100% 0.00 1.00 North North N/A N/A North North N/A  R5 Kitchen W7 ← 6.8 6.0 0.8 0.89 100% 100% 0.00 1.00 North North N/A N/A North North N/A  R6 Kitchen W8 ← 7.1 6.2 0.9 0.88 100% 100% 0.00 1.00 North North N/A N/A North North N/A  R7 Living Room W10 ← 33.3 30.8 N/A N/A  Living Room W10 ← 33.3 30.8 N/A N/A 100% 100% 0.00 1.00 86 82 N/A N/A 27 23 N/A		R12	Living Room	W16	$\downarrow$	36.4	35.2	N/A	N/A											
Living Room   W1 ↑   38.1   38.1   N/A   N/A   N/A			Living Room	W17	$\rightarrow$	39.2	39.2	N/A	N/A											
Living Room W2 ← 31.1 29.9 N/A N/A 100% 100% 0.00 1.00 North North N/A N/A North North N/A N/A R2 Kitchen W4 ← 6.2 5.8 0.4 0.94 100% 100% 0.00 1.00 North North N/A N/A North North N/A R3 Bedroom W5 ← 31.9 30.3 N/A N/A 100% 100% 0.00 1.00 North North N/A N/A North North N/A R4 Bedroom W6 ← 32.2 30.5 N/A N/A 100% 100% 0.00 1.00 North North N/A N/A North North N/A R5 Kitchen W7 ← 6.8 6.0 0.8 0.89 100% 100% 0.00 1.00 North North N/A N/A North North N/A R6 Kitchen W8 ← 7.1 6.2 0.9 0.88 100% 100% 0.00 1.00 North North N/A N/A North North N/A R7 Living Room W9 ← 32.9 30.7 N/A N/A N/A Living Room W10 ← 33.3 30.8 N/A N/A N/A Living Room W11 ↓ 36.4 33.8 N/A N/A 100% 100% 0.00 1.00 86 82 N/A N/A 27 23 N/A			Living Room	W18	$\rightarrow$	39.2	39.2	N/A	N/A	100%	100%	0.00	1.00	96	95	N/A	N/A	29	28	N/A
Living Room W3 ← 31.6 30.2 N/A N/A 100% 100% 0.00 1.00 North North N/A N/A North North N/A R2 Kitchen W4 ← 6.2 5.8 0.4 0.94 100% 100% 0.00 1.00 North North N/A N/A North North N/A N/A R3 Bedroom W5 ← 31.9 30.3 N/A N/A 100% 100% 0.00 1.00 North North N/A N/A North North N/A R4 Bedroom W6 ← 32.2 30.5 N/A N/A 100% 100% 0.00 1.00 North North N/A N/A North North N/A R5 Kitchen W7 ← 6.8 6.0 0.8 0.89 100% 100% 0.00 1.00 North North N/A N/A North North N/A R6 Kitchen W8 ← 7.1 6.2 0.9 0.88 100% 100% 0.00 1.00 North North N/A N/A North North N/A N/A North North N/A N/A North North N/A N/A North North N/A N/A North North N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	event	R1	Living Room	W1	$\uparrow$	38.1	38.1	N/A	N/A											
R2       Kitchen       W4 ←       6.2       5.8       0.4       0.94       100%       100%       0.00       1.00       North       N/A       N/A       N/A       N/A         R3       Bedroom       W5 ←       31.9       30.3       N/A       N/A       100%       100%       0.00       1.00       North       N/A       N/A       N/A       N/A       N/A       N/A       N/A       N/A       N/A       North       North       N/A       N/A       N/A       N/A       N/A       N/A       N/A       North       North       N/A       N/A <th></th> <th></th> <th>Living Room</th> <th>W2</th> <th><math>\leftarrow</math></th> <th>31.1</th> <th>29.9</th> <th>N/A</th> <th>N/A</th> <th></th>			Living Room	W2	$\leftarrow$	31.1	29.9	N/A	N/A											
R3 Bedroom W5 ← 31.9 30.3 N/A N/A 100% 100% 0.00 1.00 North North N/A N/A North North N/A R4 Bedroom W6 ← 32.2 30.5 N/A N/A 100% 100% 0.00 1.00 North North N/A N/A North North N/A R5 Kitchen W7 ← 6.8 6.0 0.8 0.89 100% 100% 0.00 1.00 North North N/A N/A North North N/A R6 Kitchen W8 ← 7.1 6.2 0.9 0.88 100% 100% 0.00 1.00 North North N/A N/A North North N/A R7 Living Room W9 ← 32.9 30.7 N/A N/A Living Room W10 ← 33.3 30.8 N/A N/A Living Room W11 ↓ 36.4 33.8 N/A N/A 100% 100% 0.00 1.00 86 82 N/A N/A 27 23 N/A			Living Room	W3	$\leftarrow$	31.6	30.2	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R4 Bedroom W6 ← 32.2 30.5 N/A N/A 100% 100% 0.00 1.00 North North N/A N/A North North N/A R5 Kitchen W7 ← 6.8 6.0 0.8 0.89 100% 100% 0.00 1.00 North North N/A N/A North North N/A R6 Kitchen W8 ← 7.1 6.2 0.9 0.88 100% 100% 0.00 1.00 North North N/A N/A N/A North North N/A R7 Living Room W9 ← 32.9 30.7 N/A N/A N/A Living Room W10 ← 33.3 30.8 N/A N/A N/A Living Room W11 ↓ 36.4 33.8 N/A N/A 100% 100% 0.00 1.00 86 82 N/A N/A 27 23 N/A		R2	Kitchen	W4	$\leftarrow$	6.2	5.8	0.4	0.94	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R5 Kitchen W7 ← 6.8 6.0 0.8 0.89 100% 100% 0.00 1.00 North North N/A N/A North North N/A R6 Kitchen W8 ← 7.1 6.2 0.9 0.88 100% 100% 0.00 1.00 North North N/A N/A N/A North North N/A R7 Living Room W9 ← 32.9 30.7 N/A N/A N/A Living Room W10 ← 33.3 30.8 N/A N/A N/A Living Room W11 ↓ 36.4 33.8 N/A N/A 100% 100% 0.00 1.00 86 82 N/A N/A 27 23 N/A		R3	Bedroom	W5	$\leftarrow$	31.9	30.3	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R6 Kitchen W8 ← 7.1 6.2 0.9 0.88 100% 100% 0.00 1.00 North North N/A N/A North North N/A  R7 Living Room W10 ← 32.9 30.7 N/A N/A  Living Room W10 ← 33.3 30.8 N/A N/A  Living Room W11 ↓ 36.4 33.8 N/A N/A 100% 100% 0.00 1.00 86 82 N/A N/A 27 23 N/A		R4	Bedroom	W6	$\leftarrow$	32.2	30.5	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R7 Living Room W9 ← 32.9 30.7 N/A N/A Living Room W10 ← 33.3 30.8 N/A N/A Living Room W11 ↓ 36.4 33.8 N/A N/A 100% 100% 0.00 1.00 86 82 N/A N/A 27 23 N/A		R5	Kitchen	W7	$\leftarrow$	6.8	6.0	8.0	0.89	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Living Room W10 ← 33.3 30.8 N/A N/A   Living Room W11 ↓ 36.4 33.8 N/A N/A 100% 100% 0.00 1.00 86 82 N/A N/A 27 23 N/A		R6	Kitchen	W8	$\leftarrow$	7.1	6.2	0.9	0.88	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Living Room W11 ↓ 36.4 33.8 N/A N/A 100% 100% 0.00 1.00 86 82 N/A N/A 27 23 N/A		R7	Living Room	W9	$\leftarrow$	32.9	30.7	N/A	N/A											
· ·			Living Room	W10	$\leftarrow$	33.3	30.8	N/A	N/A											
R8 Bedroom W12 ↓ 36.5 34.3 N/A N/A 92% 92% 0.00 1.00 N/R N/R N/R N/R N/R N/R N/R N/R			Living Room	W11	$\downarrow$	36.4	33.8	N/A	N/A	100%	100%	0.00	1.00	86	82	N/A	N/A	27	23	N/A
		R8	Bedroom	W12	$\downarrow$	36.5	34.3	N/A	N/A	92%	92%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R

Project : 19495 - Abbey Road, London, Ni Date: 12/04/2022 Scheme: SR\_08/04/2022

Scenario: Existing Vs Proposed



Prope	rty, rooi	n & window attribut	tes			V	SC			NS	SL				AP	SH (ro	om)		
Floor	Room R	oom use		ndow rientatio	Exis. (%	Prop. (%	Loss (%	Pro./Ex		Prop.	Loss	Pro./E	F	Annual (	%APSH	<i>(</i> )	Wint	er <i>(%AF</i>	PSH)
			Rei./Oi	nemano n	VSC)	VSC)	VSC)	. ratio	(% rm)	(% rm)	(m <sup>2</sup> )	x. ratio	Exis.	Prop.	Loss	Pro./Ex	Exis.	Prop. I	Pro./Ex
	R9	Bedroom	W13	$\downarrow$	36.6	34.7	N/A	N/A	85%	85%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R10	Bedroom	W14	$\downarrow$	36.9	35.4	N/A	N/A	91%	91%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R11	Bedroom	W15	$\downarrow$	36.9	35.6	N/A	N/A	99%	99%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R12	Living Room	W16	$\downarrow$	37.0	35.9	N/A	N/A											
		Living Room	W17	$\rightarrow$	39.4	39.4	N/A	N/A											
		Living Room	W18	$\rightarrow$	39.4	39.4	N/A	N/A	100%	100%	0.00	1.00	96	95	N/A	N/A	29	28	N/A
Eighth	R1	Living Room	W1	$\uparrow$	38.2	38.2	N/A	N/A											
		Living Room	W2	$\leftarrow$	31.6	30.7	N/A	N/A											
		Living Room	W3	$\leftarrow$	32.1	31.0	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Kitchen	W4	$\leftarrow$	6.3	6.0	0.3	0.96	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R3	Bedroom	W5	$\leftarrow$	32.4	31.2	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R4	Bedroom	W6	$\leftarrow$	32.8	31.4	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R5	Kitchen	W7	$\leftarrow$	6.9	6.4	0.5	0.92	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R6	Kitchen	W8	$\leftarrow$	7.2	6.6	0.6	0.91	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R7	Living Room	W9	$\leftarrow$	33.5	31.7	N/A	N/A											
		Living Room	W10	$\leftarrow$	33.9	31.9	N/A	N/A											
		Living Room	W11	$\downarrow$	37.0	34.8	N/A	N/A	100%	100%	0.00	1.00	87	83	N/A	N/A	28	24	N/A
	R8	Bedroom	W12	$\downarrow$	37.1	35.2	N/A	N/A	92%	92%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R9	Bedroom	W13	$\downarrow$	37.2	35.5	N/A	N/A	86%	86%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R10	Bedroom	W14	$\downarrow$	37.3	36.1	N/A	N/A	92%	92%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R11	Bedroom	W15	$\downarrow$	37.4	36.3	N/A	N/A	99%	99%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R12	Living Room	W16	$\downarrow$	37.5	36.5	N/A	N/A											
		Living Room	W17	$\rightarrow$	39.5	39.5	N/A	N/A											
		Living Room	W18	$\rightarrow$	39.5	39.5	N/A	N/A	100%	100%	0.00	1.00	96	95	N/A	N/A	29	28	N/A
Ninth	R1	Living Room	W1	$\uparrow$	38.3	38.3	N/A	N/A											
		Living Room	W2	$\leftarrow$	32.1	31.4	N/A	N/A											
		Living Room	W3	$\leftarrow$	32.5	31.8	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Kitchen	W4	$\leftarrow$	6.3	6.2	0.2	0.97	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A

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Scenario: Existing Vs Proposed



Prope	rty, roor	n & window attribut	es			VS	SC			NS	SL				AF	SH (roc	om)		
Floor	Room R	oom use		ndow	Exis. (%	Prop. <i>(%</i>	Loss (%	Pro./Ex		Prop.	Loss	Pro./E	F	Annual (	%APSF	1)	Wint	er (%AF	PSH)
			Rei./O	rientatio n	VSC)	VSC)	VSC)	. ratio	(% rm)	(% rm)	(m <sup>2</sup> )	x. ratio	Exis.	Prop.	Loss	Pro./Ex	Exis.	Prop.	Pro./Ex
	R3	Bedroom	W5	$\leftarrow$	32.9	32.0	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R4	Bedroom	W6	$\leftarrow$	33.2	32.2	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R5	Kitchen	W7	$\leftarrow$	7.0	6.7	0.3	0.95	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R6	Kitchen	W8	$\leftarrow$	7.3	6.9	0.4	0.95	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R7	Living Room	W9	$\leftarrow$	33.9	32.7	N/A	N/A											
		Living Room	W10	$\leftarrow$	34.3	32.8	N/A	N/A											
		Living Room	W11	$\downarrow$	37.4	35.7	N/A	N/A	100%	100%	0.00	1.00	87	84	N/A	N/A	28	25	N/A
	R8	Bedroom	W12	$\downarrow$	37.5	36.0	N/A	N/A	93%	93%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R9	Bedroom	W13	$\downarrow$	37.6	36.3	N/A	N/A	89%	89%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R10	Bedroom	W14	$\downarrow$	37.7	36.7	N/A	N/A	93%	93%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R11	Bedroom	W15	$\downarrow$	37.7	36.9	N/A	N/A	99%	99%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R12	Living Room	W16	$\downarrow$	37.8	37.0	N/A	N/A											
		Living Room	W17	$\rightarrow$	39.5	39.5	N/A	N/A											
		Living Room	W18	$\rightarrow$	39.5	39.5	N/A	N/A	100%	100%	0.00	1.00	97	96	N/A	N/A	30	29	N/A
Tenth	R1	Living Room	W1	$\uparrow$	38.4	38.4	N/A	N/A											
		Living Room	W2	$\leftarrow$	32.6	32.1	N/A	N/A											
		Living Room	W3	$\leftarrow$	33.0	32.5	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Kitchen	W4	$\leftarrow$	6.4	6.3	0.1	0.99	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R3	Bedroom	W5	$\leftarrow$	33.3	32.8	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R4	Bedroom	W6	$\leftarrow$	33.7	33.0	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R5	Kitchen	W7	$\leftarrow$	7.1	6.9	0.1	0.98	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R6	Kitchen	W8	$\leftarrow$	7.4	7.2	0.2	0.98	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R7	Living Room	W9	$\leftarrow$	34.4	33.6	N/A	N/A											
		Living Room	W10	$\leftarrow$	34.7	33.8	N/A	N/A											
		Living Room	W11	$\downarrow$	37.8	36.6	N/A	N/A	100%	100%	0.00	1.00	89	87	N/A	N/A	30	28	N/A
	R8	Bedroom	W12	$\downarrow$	37.9	36.9	N/A	N/A	97%	97%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R9	Bedroom	W13	$\downarrow$	37.9	37.0	N/A	N/A	94%	94%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R10	Bedroom	W14	$\downarrow$	38.1	37.4	N/A	N/A	97%	97%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R

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Prope	rty, roor	n & window attribut	es			VS	SC			NS	SL				AF	SH (roc	om)		
Floor	Room R	oom use		idow	Exis. (%	Prop. (%	Loss (%	Pro./Ex		Prop.	Loss	Pro./E	F	Annual (	%APSI	1)	Wint	er (%AF	PSH)
1 1001	1100111 11	00111 000	Ref./O	rientatio n	VSC)	VSC)	VSC)	. ratio	(% rm)	(% rm)	(m <sup>2</sup> )	x. ratio	Exis.	Prop.	Loss	Pro./Ex	Exis.	Prop.	Pro./Ex
	R11	Bedroom	W15	$\downarrow$	38.1	37.5	N/A	N/A	99%	99%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R12	Living Room	W16	$\downarrow$	38.1	37.6	N/A	N/A											
		Living Room	W17	$\rightarrow$	39.5	39.5	N/A	N/A											
		Living Room	W18	$\rightarrow$	39.5	39.5	N/A	N/A	100%	100%	0.00	1.00	97	96	N/A	N/A	30	29	N/A
levent	R1	Living Room	W1	$\uparrow$	38.5	38.5	N/A	N/A											
		Living Room	W2	$\leftarrow$	33.1	32.9	N/A	N/A											
		Living Room	W3	$\leftarrow$	33.5	33.3	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Kitchen	W4	$\leftarrow$	6.4	6.4	0.0	1.00	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R3	Bedroom	W5	$\leftarrow$	33.8	33.6	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R4	Bedroom	W6	$\leftarrow$	34.1	33.8	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R5	Kitchen	W7	$\leftarrow$	7.1	7.1	0.0	1.00	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R6	Kitchen	W8	$\leftarrow$	7.5	7.5	0.0	1.00	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R7	Living Room	W9	$\leftarrow$	34.8	34.4	N/A	N/A											
		Living Room	W10	$\leftarrow$	35.1	34.7	N/A	N/A											
		Living Room	W11	$\downarrow$	38.2	37.5	N/A	N/A	100%	100%	0.00	1.00	89	88	N/A	N/A	30	29	N/A
	R8	Bedroom	W12	$\downarrow$	38.2	37.6	N/A	N/A	99%	99%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R9	Bedroom	W13	$\downarrow$	38.3	37.7	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R10	Bedroom	W14	$\downarrow$	38.4	37.9	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R11	Bedroom	W15	$\downarrow$	38.4	38.0	N/A	N/A	99%	99%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R12	Living Room	W16	$\downarrow$	38.4	38.1	N/A	N/A											
		Living Room	W17	$\rightarrow$	39.5	39.5	N/A	N/A											
		Living Room	W18	$\rightarrow$	39.5	39.5	N/A	N/A	100%	100%	0.00	1.00	97	97	N/A	N/A	30	30	N/A
Twelfh	R1	Living Room	W1	$\uparrow$	38.6	38.6	N/A	N/A											
		Living Room	W2	$\leftarrow$	33.6	33.5	N/A	N/A											
		Living Room	W3	$\leftarrow$	34.0	33.9	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Kitchen	W4	$\leftarrow$	6.4	6.4	0.0	1.00	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R3	Bedroom	W5	$\leftarrow$	34.3	34.2	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R4	Bedroom	W6	$\leftarrow$	34.6	34.4	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A

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Scenario: Existing Vs Proposed



Property, roon	n & window attribut	es			VS	SC			NS	SL				AF	SH (roc	om)		
Floor Room Ro	oom use		idow	Exis. (%	Prop. (%	Loss (%	Pro./Ex	Exis.	Prop.	Loss	Pro./E	F	Annual (	%APSF	1)	Wint	er (%AF	PSH)
1 1001 1 100111 1 1	20111 400	Ref./O	rientatio n	VSC)	VSC)	VSC)	. ratio	(% rm)	(% rm)	(m <sup>2</sup> )	x. ratio	Exis.	Prop.	Loss	Pro./Ex	Exis.	Prop.	Pro./Ex
R5	Kitchen	W7	$\leftarrow$	7.2	7.2	0.0	1.00	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R6	Kitchen	W8	$\leftarrow$	7.5	7.5	0.0	1.00	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R7	Living Room	W9	$\leftarrow$	35.3	35.1	N/A	N/A											
	Living Room	W10	$\leftarrow$	35.6	35.3	N/A	N/A											
	Living Room	W11	$\downarrow$	38.5	38.1	N/A	N/A	100%	100%	0.00	1.00	89	89	N/A	N/A	30	30	N/A
R8	Bedroom	W12	$\downarrow$	38.5	38.2	N/A	N/A	99%	99%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
R9	Bedroom	W13	$\downarrow$	38.6	38.3	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
R10	Bedroom	W14	$\downarrow$	38.6	38.4	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
R11	Bedroom	W15	$\downarrow$	38.6	38.5	N/A	N/A	99%	99%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
R12	Living Room	W16	$\downarrow$	38.7	38.5	N/A	N/A											
	Living Room	W17	$\rightarrow$	39.5	39.5	N/A	N/A											
	Living Room	W18	$\rightarrow$	39.5	39.5	N/A	N/A	100%	100%	0.00	1.00	97	97	N/A	N/A	30	30	N/A
nirteen R1	Living Room	W1	$\uparrow$	38.7	38.7	N/A	N/A											
	Living Room	W2	$\leftarrow$	34.2	34.2	N/A	N/A											
	Living Room	W3	$\leftarrow$	34.6	34.5	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R2	Kitchen	W4	$\leftarrow$	6.4	6.4	0.0	1.00	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R3	Bedroom	W5	$\leftarrow$	34.8	34.8	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R4	Bedroom	W6	$\leftarrow$	35.1	35.1	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R5	Kitchen	W7	$\leftarrow$	7.2	7.2	0.0	1.00	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R6	Kitchen	W8	$\leftarrow$	7.6	7.6	0.0	1.00	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R7	Living Room	W9	$\leftarrow$	35.7	35.7	N/A	N/A											
	Living Room	W10	$\leftarrow$	36.0	36.0	N/A	N/A											
	Living Room	W11	$\downarrow$	38.8	38.8	N/A	N/A	100%	100%	0.00	1.00	89	89	N/A	N/A	30	30	N/A
R8	Bedroom	W12	$\downarrow$	38.8	38.8	N/A	N/A	99%	99%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
R9	Bedroom	W13	$\downarrow$	38.9	38.8	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
R10	Bedroom	W14	$\downarrow$	38.9	38.9	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
R11	Bedroom	W15	$\downarrow$	38.9	38.9	N/A	N/A	99%	99%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
R12	Living Room	W16	$\downarrow$	38.9	38.9	N/A	N/A											

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Prop	erty, rooi	m & window attribut	es			VS	SC			NS	SL				AF	SH (roc	om)		
		oom use	Wir	dow	Exis.	Prop.	Loss (%	Pro./Ex	Exis.	Prop.	Loss	Pro./E	A	Annual (				er (%AF	PSH)
1 1001	TOOIII TO	00111 030	Ref./O	rientatio n	VSC)	VSC)	VSC)	. ratio	(% rm)	(% rm)	(m <sup>2</sup> )	x. ratio	Exis.	Prop.	Loss	Pro./Ex	Exis.	Prop.	Pro./Ex
		Living Room	W17	$\rightarrow$	39.5	39.5	N/A	N/A											
		Living Room	W18	$\rightarrow$	39.5	39.5	N/A	N/A	100%	100%	0.00	1.00	97	97	N/A	N/A	30	30	N/A
urtee	R1	Living Room	W1	$\uparrow$	38.8	38.8	N/A	N/A											
		Living Room	W2	$\leftarrow$	34.8	34.8	N/A	N/A											
		Living Room	W3	$\leftarrow$	35.1	35.1	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Kitchen	W4	$\leftarrow$	6.9	6.9	0.0	1.00	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R3	Bedroom	W5	$\leftarrow$	35.4	35.4	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R4	Bedroom	W6	$\leftarrow$	35.6	35.6	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R5	Kitchen	W7	$\leftarrow$	7.6	7.6	0.0	1.00	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R6	Kitchen	W8	$\leftarrow$	7.9	7.9	0.0	1.00	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R7	Living Room	W9	$\leftarrow$	36.2	36.2	N/A	N/A											
		Living Room	W10	$\leftarrow$	36.4	36.4	N/A	N/A											
		Living Room	W11	$\downarrow$	39.1	39.1	N/A	N/A	100%	100%	0.00	1.00	89	89	N/A	N/A	30	30	N/A
	R8	Bedroom	W12	$\downarrow$	39.1	39.1	N/A	N/A	99%	99%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R9	Bedroom	W13	$\downarrow$	39.1	39.1	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R10	Bedroom	W14	$\downarrow$	39.1	39.1	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R11	Bedroom	W15	$\downarrow$	39.2	39.2	N/A	N/A	99%	99%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R12	Living Room	W16	$\downarrow$	39.2	39.2	N/A	N/A											
		Living Room	W17	$\rightarrow$	39.5	39.5	N/A	N/A											
		Living Room	W18	$\rightarrow$	39.5	39.5	N/A	N/A	100%	100%	0.00	1.00	97	97	N/A	N/A	30	30	N/A
ifteen	R1	Living Room	W1	$\uparrow$	38.9	38.9	N/A	N/A											
		Living Room	W2	$\leftarrow$	35.5	35.5	N/A	N/A											
		Living Room	W3	$\leftarrow$	35.8	35.8	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Kitchen	W4	$\leftarrow$	7.5	7.5	0.0	1.00	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R3	Bedroom	W5	$\leftarrow$	36.0	36.0	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R4	Bedroom	W6	$\leftarrow$	36.2	36.2	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R5	Kitchen	W7	$\leftarrow$	8.1	8.1	0.0	1.00	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R6	Kitchen	W8	$\leftarrow$	8.4	8.4	0.0	1.00	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A

Date: 12/04/2022 Scheme: SR\_08/04/2022 Scenario: Existing Vs Proposed



Property,	room & window attribut	es			VS	SC			NS	SL				AF	SH (roc	om)		
Floor Roor	n Room use		idow	Exis. (%	Prop. <i>(%</i>	Loss (%	Pro./Ex	Exis.	Prop.	Loss	Pro./E	F	Annual (	%APSF	1)	Wint	ter (%AF	PSH)
1 1001 11001	II Room asc	Ref./Oi	rientatio n	VSC)	VSC)	VSC)	. ratio	(% rm)	(% rm)	(m <sup>2</sup> )	x. ratio	Exis.	Prop.	Loss	Pro./Ex	Exis.	Prop.	Pro./Ex
R7	Living Room	W9	$\leftarrow$	36.7	36.7	N/A	N/A											
	Living Room	W10	$\leftarrow$	36.9	36.9	N/A	N/A											
	Living Room	W11	$\downarrow$	39.4	39.4	N/A	N/A	100%	100%	0.00	1.00	89	89	N/A	N/A	30	30	N/A
R8	Bedroom	W12	$\downarrow$	39.4	39.4	N/A	N/A	99%	99%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
R9	Bedroom	W13	$\downarrow$	39.4	39.4	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
R10	) Bedroom	W14	$\downarrow$	39.4	39.4	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
R11	I Bedroom	W15	$\downarrow$	39.4	39.4	N/A	N/A	99%	99%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
R12	2 Living Room	W16	$\downarrow$	39.4	39.4	N/A	N/A											
	Living Room	W17	$\rightarrow$	39.6	39.6	N/A	N/A											
	Living Room	W18	$\rightarrow$	39.6	39.6	N/A	N/A	100%	100%	0.00	1.00	97	97	N/A	N/A	30	30	N/A
ixteen R1	Living Room	W1	$\uparrow$	39.0	39.0	N/A	N/A											
	Living Room	W2	$\leftarrow$	36.2	36.2	N/A	N/A											
	Living Room	W3	$\leftarrow$	36.4	36.4	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R2	Kitchen	W4	$\leftarrow$	8.1	8.1	0.0	1.00	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R3	Bedroom	W5	$\leftarrow$	36.6	36.6	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R4	Bedroom	W6	$\leftarrow$	36.8	36.8	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R5	Kitchen	W7	$\leftarrow$	8.6	8.6	0.0	1.00	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R6	Kitchen	W8	$\leftarrow$	8.8	8.8	0.0	1.00	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R7	Living Room	W9	$\leftarrow$	37.2	37.2	N/A	N/A											
	Living Room	W10	$\leftarrow$	37.3	37.3	N/A	N/A											
	Living Room	W11	$\downarrow$	39.5	39.5	N/A	N/A	100%	100%	0.00	1.00	89	89	N/A	N/A	30	30	N/A
R8	Bedroom	W12	$\downarrow$	39.5	39.5	N/A	N/A	99%	99%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
R9	Bedroom	W13	$\downarrow$	39.5	39.5	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
R10	) Bedroom	W14	$\downarrow$	39.5	39.5	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
R11	I Bedroom	W15	$\downarrow$	39.5	39.5	N/A	N/A	99%	99%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
R12	2 Living Room	W16	$\downarrow$	39.5	39.5	N/A	N/A											
	Living Room	W17	$\rightarrow$	39.6	39.6	N/A	N/A											
	Living Room	W18	$\rightarrow$	39.6	39.6	N/A	N/A	100%	100%	0.00	1.00	97	97	N/A	N/A	30	30	N/A

Daylight / Sunlight Neighbouring Properties DELVA PATMAN REDLER

Chartered Surveyors

Date: 12/04/2022 Scheme: SR\_08/04/2022 Scenario: Existing Vs Proposed

Prope	rty, rooi	m & window attribu	tes			VS	SC			NS	SL				AF	SH (roo	om)		
Floor	Room R	oom use		idow rientatio n	Exis. (% VSC)	Prop. (% VSC)	Loss (% VSC)	Pro./Ex . ratio	Exis. (% rm)	Prop. (% rm)	Loss (m²)	Pro./E x. ratio	Exis.	Annual <i>(</i> Prop.		− <i>l)</i> Pro./Ex		er <i>(%AF</i> Prop. l	
/entee	R1	Living Room	W1	$\uparrow$	39.1	39.1	N/A	N/A											
		Living Room	W2	$\leftarrow$	36.8	36.8	N/A	N/A											
		Living Room	W3	$\leftarrow$	37.0	37.0	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Kitchen	W4	$\leftarrow$	8.7	8.7	0.0	1.00	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R3	Bedroom	W5	$\leftarrow$	37.2	37.2	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R4	Bedroom	W6	$\leftarrow$	37.3	37.3	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R5	Kitchen	W7	$\leftarrow$	9.1	9.1	0.0	1.00	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R6	Kitchen	W8	$\leftarrow$	9.3	9.3	0.0	1.00	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R7	Living Room	W9	$\leftarrow$	37.7	37.7	N/A	N/A											
		Living Room	W10	$\leftarrow$	37.8	37.8	N/A	N/A											
		Living Room	W11	$\downarrow$	39.5	39.5	N/A	N/A	100%	100%	0.00	1.00	89	89	N/A	N/A	30	30	N/A
	R8	Bedroom	W12	$\downarrow$	39.5	39.5	N/A	N/A	99%	99%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R9	Bedroom	W13	$\downarrow$	39.5	39.5	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R10	Bedroom	W14	$\downarrow$	39.5	39.5	N/A	N/A	98%	98%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R11	Bedroom	W15	$\downarrow$	39.5	39.5	N/A	N/A	99%	99%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
	R12	Living Room	W16	$\downarrow$	39.5	39.5	N/A	N/A											
		Living Room	W17	$\rightarrow$	39.6	39.6	N/A	N/A											
		Living Room	W18	$\rightarrow$	39.6	39.6	N/A	N/A	100%	100%	0.00	1.00	97	97	N/A	N/A	30	30	N/A
ghteer	R1	Living Room	W1	$\uparrow$	39.3	39.3	N/A	N/A											
		Living Room	W2	$\leftarrow$	37.5	37.5	N/A	N/A											
		Living Room	W3	$\leftarrow$	37.7	37.7	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Kitchen	W4	$\leftarrow$	9.3	9.3	0.0	1.00	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R3	Bedroom	W5	$\leftarrow$	37.8	37.8	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R4	Bedroom	W6	$\leftarrow$	37.9	37.9	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R5	Kitchen	W7	$\leftarrow$	9.6	9.6	0.0	1.00	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R6	Kitchen	W8	$\leftarrow$	9.7	9.7	0.0	1.00	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R7	Living Room	W9	$\leftarrow$	38.2	38.2	N/A	N/A											
		Living Room	W10	$\leftarrow$	38.3	38.3	N/A	N/A											

Project : 19495 - Abbey Road, London, N Date: 12/04/2022 Scheme: SR\_08/04/2022

Scenario: Existing Vs Proposed



Prope	rty, roor	m & window attribut	tes			VS	SC			NS	SL				AP	SH (ro	om)		
Floor	Room R	oom use		ndow	Exis. (%	Prop. <i>(%</i>	Loss (%	Pro./Ex		Prop.	Loss	Pro./E	P	nnual (	%APSH	<i>(</i> )	Wint	er (%AF	PSH)
1 1001	1100111 11		Ref./O	rientatio n	VSC)	VSC)	VSC)	. ratio	(% rm)	(% rm)	(m <sup>2</sup> )	x. ratio	Exis.	Prop.	Loss	Pro./Ex	Exis.	Prop.	Pro./Ex
		Living Room	W11	$\downarrow$	39.6	39.6	N/A	N/A	100%	100%	0.00	1.00	90	90	N/A	N/A	30	30	N/A
	R8	Bedroom	W12	$\downarrow$	39.6	39.6	N/A	N/A	99%	99%	0.00	1.00	N/R						
	R9	Bedroom	W13	$\downarrow$	39.6	39.6	N/A	N/A	98%	98%	0.00	1.00	N/R						
	R10	Bedroom	W14	$\downarrow$	39.6	39.6	N/A	N/A	98%	98%	0.00	1.00	N/R						
	R11	Bedroom	W15	$\downarrow$	39.6	39.6	N/A	N/A	99%	99%	0.00	1.00	N/R						
	R12	Living Room	W16		39.6	39.6	N/A	N/A											
		Living Room	W17		39.6	39.6	N/A	N/A											
		Living Room	W18	$\rightarrow$	39.6	39.6	N/A	N/A	100%	100%	0.00	1.00	97	97	N/A	N/A	30	30	N/A
neteer	R1	Living Room	W1	$\uparrow$	39.4	39.4	N/A	N/A											
		Living Room	W2	$\leftarrow$	38.2	38.2	N/A	N/A											
		Living Room	W3	$\leftarrow$	38.3	38.3	N/A	N/A	100%	100%	0.00	1.00		North	N/A	N/A		North	N/A
	R2	Kitchen	W4	$\leftarrow$	9.8	9.8	0.0	1.00	100%	100%	0.00	1.00		North	N/A	N/A	North	North	N/A
	R3	Bedroom	W5	$\leftarrow$	38.4	38.4	N/A	N/A	100%	100%	0.00	1.00	North		N/A	N/A		North	N/A
	R4	Bedroom	W6	$\leftarrow$	38.5	38.5	N/A	N/A	100%	100%	0.00	1.00		North	N/A	N/A	North	North	N/A
	R5	Kitchen	W7	<b>←</b>	10.0	10.0	0.0	1.00	100%	100%	0.00	1.00		North	N/A	N/A	North	North	N/A
	R6	Kitchen	W8	<b>←</b>	10.1	10.1	0.0	1.00	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R7	Living Room	W9	<b>←</b>	38.6	38.6	N/A	N/A											
		Living Room	W10		38.7	38.7	N/A	N/A	4000/	4000/	0.00	4.00	00	00	D 1 / A	D.1./ A	0.0	00	N I / A
	R8	Living Room	W11		39.6	39.6	N/A	N/A	100%	100% 99%	0.00	1.00	90 N/R	90 N/R	N/A	N/A	30 N/R	30 N/R	N/A N/R
	R9	Bedroom	W12		39.6	39.6	N/A	N/A							N/R	N/R			
	R10	Bedroom Bedroom	W13 W14		39.6 39.6	39.6 39.6	N/A N/A	N/A N/A	98% 98%	98% 98%	0.00	1.00	N/R N/R	N/R N/R	N/R N/R	N/R N/R	N/R N/R	N/R N/R	N/R N/R
	R11	Bedroom	W15		39.6	39.6	N/A	N/A	99%	99%	0.00	1.00	N/R						
	R12	Living Room	W15		39.6	39.6	N/A	N/A	33 70	33 /0	0.00	1.00	TN/TX	TN/TX	IN/IN	TV/FX	TN/TX	TV/TX	TN/TX
	1112	Living Room	W17		39.6	39.6	N/A	N/A											
		Living Room	W17		39.6	39.6	N/A	N/A	100%	100%	0.00	1.00	97	97	N/A	N/A	30	30	N/A
		Living Room	VV 10	7	33.0	33.0	11/71	IN//	100 /0	100 /0	0.00	1.00	31	31	IN/ /	1 N/ /-\	30	30	IN/ /-\
123 B	elsize R	nad																	
123 0	CISIZE N	Jau																	

Date: 12/04/2022 Scheme: SR\_08/04/2022 Scenario: Existing Vs Proposed



Property, room	n & window attribu	ıtes		VS	SC			NS	SL				AF	SH (roc	m)		
Floor Room Ro	oom use	Window Ref./Orientatio	Exis. (%	Prop. (%	Loss (%	Pro./Ex	Exis.	Prop.	Loss	Pro./E	P	Annual (		<i>'</i>		er (%AF	
		n	VSC)	VSC)	VSC)	. ratio	(% rm)	(% rm)	(m <sup>2</sup> )	x. ratio	Exis.			Pro./Ex		Prop.	
asemeing Ro	Living Room	WB_01 ↑	27.9	27.4	N/A	N/A	88%	88%	0.00	1.00	North	North	N/A	N/A		North	
Sedroor	Bedroom	WB_02 ↑	24.8	24.8	0.0	1.00	82%	82%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Groun@oom 1	Living Room	WG_01 ↑	28.7	28.2	N/A	N/A	91%	91%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Room 2	Living Room	WG_02 ↑	27.2	26.9	0.3	0.99	85%	85%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Room (	Bedroom	WG_03 ↑	26.2	26.2	0.1	1.00											
	Bedroom	WG_04 ↑	23.7	23.7	0.0	1.00											
	Bedroom	WG_05 ↑	25.4	25.4	0.0	1.00	90%	90%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
First Kitcher	Kitchen	W1_05 ↑	26.4	26.4	0.0	1.00	96%	96%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Room 1	Living Room	W1_01 ↑	29.8	29.4	N/A	N/A											
	Living Room	W1_02 ↑	29.6	29.2	N/A	N/A	89%	89%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Room 2	Living Room	W1_03 ↑	28.5	28.2	N/A	N/A											
	Living Room	W1_04 ↑	27.3	27.1	N/A	N/A	84%	84%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
SeconRoom 1	Living Room	W2_01 ↑	30.3	29.9	N/A	N/A	84%	83%	0.02	1.00	North	North	N/A	N/A	North	North	N/A
Room 2	Living Room	W2_02 ↑	29.4	29.1	N/A	N/A	76%	75%	0.01	1.00	North	North	N/A	N/A	North	North	N/A
125 Belsize Ro	oad																
asemeing Ro	Living Room	WB_01 ↑	26.3	25.6	0.6	0.98	90%	90%	0.15	0.99	North	North	N/A	N/A	North	North	N/A
Groun∉edroor	Bedroom	WG_01 ↑	27.4	26.9	0.6	0.98	92%	92%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Room 1	Living Room	WG_02 ↑	17.8	17.1	0.7	0.96											
	Living Room	WG_03 ↑	21.5	20.8	0.7	0.97											
	Living Room	WG_04 ↑	20.2	19.5	0.7	0.97	80%	80%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
First 3edroor	Bedroom	W1_01 ↑	28.3	27.8	N/A	N/A											
	Bedroom	W1_02 ↑	28.3	27.8	N/A	N/A											
	Bedroom	W1_03 ↑	28.1	27.6	N/A	N/A	87%	87%	0.01	1.00	North	North	N/A	N/A	North	North	N/A
Room 1	Living Room	W1_04 ↑	20.9	20.3	0.7	0.97	81%	81%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Seconsedroor	Bedroom	W2_01 ↑	29.1	28.6	N/A	N/A	76%	76%	0.01	1.00	North	North	N/A	N/A	North	North	N/A
127 Belsize Ro	oad																

Date: 12/04/2022 Scheme: SR\_08/04/2022

Scenario: Existing Vs Proposed



Property, room	n & window attrib	utes		VS	SC			NS	SL				AF	SH (roc	om)		
Floor Room Ro	nom use	Window	Exis. (%	Prop. <i>(%</i>	Loss (%	Pro./Ex		Prop.	Loss	Pro./E	F	Annual (	%APSF	1)	Wint	er (%AF	PSH)
TIOOT ROOM RC	Join ase	Ref./Orientatio	VSC)	VSC)	VSC)	. ratio	(% rm)	(% rm)	(m <sup>2</sup> )	x. ratio	Exis.	Prop.	Loss	Pro./Ex	Exis.	Prop.	Pro./Ex
asemeing Ro	Living Room	WB_01 ↑	24.3	23.4	0.9	0.96	74%	74%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Bedroor	Bedroom	WB_02 ↑	21.1	21.1	0.0	1.00	73%	73%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Grounedroom	Bedroom	WG_01 ↑	25.1	24.2	0.9	0.96	82%	82%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Room 1	Bedroom	WG_03 ⊼	23.1	22.7	0.3	0.99											
	Bedroom	WG_04 <b></b>	20.1	20.1	0.0	1.00											
	Bedroom	WG_05 <sup>►</sup>	22.2	22.0	0.2	0.99	89%	89%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
∍droom	Bedroom	WG_02 ↑	23.8	23.2	0.7	0.97	84%	84%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
First Kitcher	Kitchen	W1_05 ►	23.1	22.9	0.2	0.99	77%	77%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
ing Ro	Living Room	W1_03 ↑	25.1	24.4	0.7	0.97											
	Living Room	W1_04 ↑	24.0	23.5	0.5	0.98	73%	73%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Sedroor	Bedroom	W1_01 ↑	26.1	25.2	0.9	0.97											
	Bedroom	W1_02 ↑	26.0	25.1	0.9	0.97	87%	87%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Seconedroom	Bedroom	W2_01 ↑	26.7	25.9	0.8	0.97	71%	70%	0.10	0.98	North	North	N/A	N/A	North	North	N/A
∍droom	Bedroom	W2_02 ↑	25.9	25.3	0.6	0.98	55%	54%	0.13	0.98	North	North	N/A	N/A	North	North	N/A
129 Belsize Ro	oad																
asemeKitcher	Kitchen	WB_03 ←	13.3	13.3	0.0	1.00	87%	87%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
∋droom	Bedroom	WB_01 ↑	22.7	21.6	1.1	0.95	53%	50%	0.27	0.96	North	North	N/A	N/A	North	North	N/A
∋droom	Bedroom	WB_02 ↑	22.9	21.7	1.2	0.95	67%	67%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Grounedroom	Bedroom	WG_01 ↑	24.4	23.2	1.2	0.95	67%	67%	0.01	1.00	North	North	N/A	N/A	North	North	N/A
∋droom	Bedroom	WG_02 ↑	24.3	23.1	1.2	0.95											
	Bedroom	WG_03 ←	15.8	13.0	2.8	0.82	99%	99%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
Room 2	Bedroom	WG_04 ↑	6.6	6.6	0.0	1.00											
	Bedroom	WG_05 ↑	9.5	9.5	0.0	1.00											
	Bedroom	WG_06 ↑	3.9	3.3	0.6	0.84	89%	89%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Room (	Bedroom	WG_07 ←	24.5	21.8	2.7	0.89	85%	78%	0.37	0.91	N/R	N/R	N/R	N/R	N/R	N/R	N/R
First Kitcher	Kitchen	W1_04 ↑	18.7	17.3	1.4	0.93	81%	81%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Bedroor	Bedroom	W1_01 ↑	25.3	24.2	1.1	0.96											

Date: 12/04/2022 Scheme: SR\_08/04/2022

Scenario: Existing Vs Proposed



Property, room	& window attribu	tes		VS	SC			N	SL				AP	SH (roc	om)		
Floor Room Ro	om use	Window	Exis. (%	Prop. (%	Loss (%	Pro./Ex	Exis.	Prop.	Loss	Pro./E	F	Annual (	%APSF	<i>d)</i>	Wint	er (%AP	PSH)
TIOOT ROOM NO	om use	Ref./Orientatio n	VSC)	VSC)	VSC)	. ratio	(% rm)	(% rm)	(m <sup>2</sup> )	x. ratio	Exis.	Prop.	Loss	Pro./Ex	Exis.	Prop. F	Pro./Ex
	Bedroom	W1_02 ↑	25.3	24.1	1.2	0.95											
	Bedroom	W1_03 ↑	25.2	24.0	1.2	0.95	86%	85%	0.18	0.99	North	North	N/A	N/A	North	North	N/A
Secon&edroor	Bedroom	W2_01 ↑	26.1	25.0	1.1	0.96	78%	78%	0.14	0.99	North	North	N/A	N/A	North	North	N/A
Wingreen																	
Groun(Room 1	Living Room	WG_01 ↑	27.6	27.6	N/A	N/A	88%	86%	0.33	0.98	North	North	N/A	N/A	North	North	N/A
Room 2	Living Room	WG_01↑ WG_02↑	28.2	28.1	N/A	N/A	0070		0.00	0.00	1401111	1401111	14/71	14//	1401111	1401111	14// (
1001111	Living Room	WG_03 ↑	28.4	28.3	N/A	N/A	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Room (	Living Room	WG_04 ↑	28.6	28.5	N/A	N/A	0070	0070	0.00	1.00	1101111	1101111	14/71	1 4/7 (	1401411	1101111	14//
, 100 (	Living Room	WG_05 ↑	28.8	28.7	N/A	N/A	99%	99%	0.02	1.00	North	North	N/A	N/A	North	North	N/A
Room 4	Living Room	WG_06 ↑	29.0	28.9	N/A	N/A											
	Living Room	WG_07 ↑	29.1	29.0	N/A	N/A	97%	97%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Room t	Living Room	WG_08↑	29.1	29.0	N/A	N/A											
	Living Room	WG_09 ↑	29.2	29.1	N/A	N/A	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Room (	Living Room	WG_10 ↑	29.2	29.1	N/A	N/A											
	Living Room	WG_11 ←	25.1	25.1	0.0	1.00											
	Living Room	WG_12 ←	23.8	23.8	0.0	1.00	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Room 7	Living Room	WG_13 ←	19.0	19.0	0.0	1.00											
	Living Room	WG_14 ←	17.0	17.0	0.0	1.00	76%	76%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
First Room 1	Living Room	W1_01 ↑	29.6	29.5	N/A	N/A	72%	69%	0.56	0.96	North	North	N/A	N/A	North	North	N/A
Room 2	Living Room	W1_02 ↑	29.9	29.8	N/A	N/A											
	Living Room	W1_03 ↑	30.1	29.9	N/A	N/A	98%	98%	0.03	1.00	North	North	N/A	N/A	North	North	N/A
Room (	Living Room	W1_04 ↑	30.2	30.1	N/A	N/A											
	Living Room	W1_05 ↑	30.3	30.2	N/A	N/A	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Room 4	Living Room	W1_06 ↑	30.5	30.4	N/A	N/A											
	Living Room	W1_07 ↑	30.5	30.4	N/A	N/A	96%	96%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Room t	Living Room	W1_08 ↑	30.5	30.4	N/A	N/A											
	Living Room	W1_09 ↑	30.6	30.4	N/A	N/A	97%	97%	0.00	1.00	North	North	N/A	N/A	North	North	N/A

Date: 12/04/2022 Scheme: SR\_08/04/2022 Scenario: Existing Vs Proposed



Room   Room   Window   Red. Department   Window   Red. Department   Red. Departmen	Property, room	n & window attribu	tes		V	SC			NS	SL				AP	SH (roc	om)		
Room € Living Room   W1_0 ↑   30.5   30.4   N/A   N/A   N/A   Living Room   W1_11 ←   26.9   26.8   0.0   1.00   90%   90%   0.00   1.00   North   North   N/A   N/A   North   North   N/A   North	Floor Room Ro	nom use					Pro./Ex				Pro./E	F	Annual (	%APSF	1)	Wint	er (%Al	PSH)
Living Room W1_11 ← 26.9 26.8 0.0 1.00 90% 90% 0.00 1.00 North North N/A N/A North North N/A Room; Living Room W1_12 ← 21.6 21.5 0.0 1.00 7.4% 74% 74% 0.00 1.00 North North N/A N/A N/A North North N/A Room; Living Room W2_01 ↑ 31.3 31.2 N/A N/A 86% 83% 0.57 0.96 North North N/A N/A North North N/A Room; Living Room W2_02 ↑ 31.6 31.5 N/A N/A N/A 99% 99% 0.00 1.00 North North N/A N/A North North N/A N/A Room; Living Room W2_03 ↑ 31.6 31.5 N/A N/A 99% 99% 0.00 1.00 North North N/A N/A North North N/A N/A North North N/A Room; Living Room W2_05 ↑ 31.7 31.6 N/A N/A N/A P9% 99% 0.00 1.00 North North N/A N/A North North N/A Room; Living Room W2_08 ↑ 31.7 31.6 N/A N/A N/A P8% 98% 0.01 1.00 North North N/A N/A N/A North North N/A N/A Room; Living Room W2_09 ↑ 31.8 31.6 N/A N/A N/A N/A N/A Living Room W2_09 ↑ 31.8 31.6 N/A N/A N/A Living Room W2_09 ↑ 31.8 31.6 N/A N/A N/A Living Room W2_08 ↑ 31.7 31.6 N/A N/A N/A Living Room W2_10 ↑ 31.7 31.6 N/A N/A N/A N/A Living Room W2_10 ↑ 31.7 31.6 N/A N/A N/A N/A Living Room W2_10 ↑ 31.7 31.6 N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	11001 1100111 110		Ref./Orientatio				. ratio	(% rm)	(% rm)	(m <sup>2</sup> )	x. ratio	Exis.	Prop.	Loss	Pro./Ex	Exis.	Prop.	Pro./Ex
Room;   Living Room   W1_12 \( = \) 21.6   21.5   0.0   1.00   74%   74%   0.00   1.00   North   North   N/A   N/A   North   N/A   N/A     BeconRoom   Living Room   W2_01 \( \pha \) 31.3   31.2   N/A   N/A   86%   83%   0.57   0.96   North   North   N/A   N/A   N/A   N/A   N/A     Room;   Living Room   W2_02 \( \pha \) 31.6   31.5   N/A   N/A   99%   99%   0.00   1.00   North   North   N/A   N/A   N/A   N/A     Room;   Living Room   W2_03 \( \pha \) 31.6   31.5   N/A   N/A   N/A   99%   99%   0.00   1.00   North   North   N/A   N/A   N/A   N/A     Living Room   W2_04 \( \pha \) 31.7   31.6   N/A   N/A   N/A   N/A     Living Room   W2_06 \( \pha \) 31.8   31.6   N/A   N/A   N/A   98%   98%   0.01   1.00   North   North   N/A   N/A   N/A   N/A     Room;   Living Room   W2_06 \( \pha \) 31.7   31.6   N/A   N/A   N/A   N/A   98%   98%   0.01   1.00   North   North   N/A   N/A   N/A   N/A   N/A     Room;   Living Room   W2_09 \( \pha \) 31.7   31.6   N/A   N/A   N/A   N/A   N/A   N/A     Living Room   W2_11 \( \pha \) 30.9   30.9   N/A   N/A   N/A     Room;   Living Room   W2_12 \( \pha \) 25.5   25.5   0.0   1.00   1.00   North   North   N/A   N/A   N/A   N/A   N/A   N/A     Room;   Living Room   W2_14 \( \pha \) 21.7   21.7   0.0   1.00   88%   88%   0.00   1.00   North   North   N/A   N/	Room (	Living Room	W1_10 ↑	30.5	30.4	N/A	N/A											
SeconRoom		Living Room	W1_11 ←	26.9	26.8	0.0	1.00	90%	90%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Room : Living Room   W2_02 ↑   31.6   31.4   N/A   N/A   N/A   N/A   N/A   Living Room   W2_03 ↑   31.6   31.5   N/A   N/A   N/A   99%   99%   0.00   1.00   North   N/A   N/A   N/A   North   N/A   N/A   North   N/A   N/A   North   N/A   N/A   North   N/A   N/A   North   N/A   N/A   North   N/A   N/A   North   N/A	Room 7	Living Room	W1_12 ←	21.6	21.5	0.0	1.00	74%	74%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Living Room W2_03 ↑ 31.6 31.5 N/A N/A 99% 99% 0.00 1.00 North North N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	SeconRoom 1	Living Room	W2_01 ↑	31.3	31.2	N/A	N/A	86%	83%	0.57	0.96	North	North	N/A	N/A	North	North	N/A
Room   Living Room   W2_04 ↑   31.7   31.5   N/A   N/A   99%   99%   0.00   1.00   North   North   N/A	Room 2	Living Room	W2_02 ↑	31.6	31.4	N/A	N/A											
Living Room W2_05 ↑ 31.7 31.6 N/A N/A 99% 99% 0.00 1.00 North North N/A N/A North North N/A Room 4 Living Room W2_06 ↑ 31.8 31.6 N/A N/A N/A 98% 98% 0.01 1.00 North North N/A N/A North North N/A N/A North North N/A N/A North North N/A N/A North North N/A N/A North North N/A N/A North North N/A N/A North North N/A N/A North North N/A N/A North North N/A N/A North North N/A N/A N/A North North N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A		Living Room	W2_03 ↑	31.6	31.5	N/A	N/A	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Room 4	Room (	Living Room	W2_04 ↑	31.7	31.5	N/A	N/A											
Living Room W2_07 ↑ 31.7 31.6 N/A N/A 98% 98% 0.01 1.00 North North N/A N/A North North N/A Room € Living Room W2_08 ↑ 31.7 31.6 N/A N/A N/A 98% 98% 0.02 1.00 North North N/A N/A North North N/A N/A North North N/A N/A Room € Living Room W2_10 ↑ 31.7 31.6 N/A N/A N/A N/A N/A Living Room W2_11 ← 30.9 30.9 N/A N/A Living Room W2_12 ← 30.2 30.1 N/A N/A N/A 100% 100% 0.00 1.00 North North N/A N/A N/A North North N/A Room ₹ Living Room W2_13 ← 25.5 25.5 0.0 1.00 Living Room W2_14 ← 21.7 21.7 0.0 1.00 88% 88% 0.00 1.00 North North N/A N/A N/A North North N/A Room ₹ Living Room W3_01 ↑ 33.1 32.9 N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A		Living Room	W2_05 ↑	31.7	31.6	N/A	N/A	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Room   Eliving Room   W2_08 ↑   31.7   31.6   N/A   N/A   N/A   98%   98%   0.02   1.00   North   North   N/A   N/A   North   N/A   North   N/A   North   N/A   North   N/A   North   N/A   North   N/A   North   N/A   North   N/A   North   N/A   North   N/A   North   N/A   N/A   North   N/A   N/A   North   N/A	Room 4	Living Room	W2_06 ↑	31.8	31.6	N/A	N/A											
Living Room W2_09 ↑ 31.8 31.6 N/A N/A 98% 98% 0.02 1.00 North North N/A N/A North North N/A N/A North North N/A Room € Living Room W2_11 ← 30.9 30.9 N/A N/A 100% 100% 0.00 1.00 North North N/A N/A N/A North North N/A N/A N/A North North N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A		Living Room	W2_07 ↑	31.7	31.6	N/A	N/A	98%	98%	0.01	1.00	North	North	N/A	N/A	North	North	N/A
Room €         Living Room         W2_10 ↑         31.7         31.6         N/A         N/A         N/A         N/A         N/A         N/A         Living Room         W2_11 ←         30.9         30.9         N/A	Room t	Living Room	W2_08 ↑	31.7	31.6	N/A	N/A											
Living Room W2_11 ← 30.9 30.9 N/A N/A   Living Room W2_12 ← 30.2 30.1 N/A N/A 100% 100% 0.00 1.00 North North N/A N/A North North N/A   Room; Living Room W2_13 ← 25.5 25.5 0.0 1.00   Living Room W2_14 ← 21.7 21.7 0.0 1.00 88% 88% 0.00 1.00 North North N/A N/A North North N/A   Third Room; Living Room W3_01 ↑ 33.1 32.9 N/A N/A 76% 73% 0.54 0.96 North North N/A N/A North North N/A   Room; Living Room W3_02 ↑ 33.1 33.0 N/A N/A   Living Room W3_03 ↑ 33.1 32.9 N/A N/A 98% 98% 0.00 1.00 North North N/A N/A North North N/A   Room; Living Room W3_04 ↑ 33.1 32.9 N/A N/A 98% 98% 0.00 1.00 North North N/A N/A North North N/A   Room; Living Room W3_05 ↑ 33.1 32.9 N/A N/A 98% 98% 0.00 1.00 North North N/A N/A North North N/A   Room; Living Room W3_05 ↑ 33.1 32.9 N/A N/A 98% 98% 0.00 1.00 North North N/A N/A North North N/A   Room; Living Room W3_05 ↑ 33.0 32.9 N/A N/A 98% 98% 0.01 1.00 North North N/A N/A N/A North North N/A   Living Room W3_07 ↑ 33.0 32.8 N/A N/A 98% 98% 0.01 1.00 North North N/A N/A N/A N/A N/A North North N/A   Room; Living Room W3_08 ↑ 33.0 32.8 N/A N/A 98% 98% 0.00 1.00 North North N/A N/A N/A N/A N/A N/A   Living Room W3_09 ↑ 32.9 32.8 N/A N/A 98% 98% 0.00 1.00 North North N/A N/A N/A N/A N/A N/A N/A   Living Room W3_09 ↑ 32.9 32.8 N/A N/A 98% 98% 0.00 1.00 North North N/A N/A N/A N/A N/A N/A N/A   Living Room W3_09 ↑ 32.9 32.8 N/A N/A 98% 98% 0.00 1.00 North North N/A N/A N/A N/A N/A N/A N/A N/A Living Room W3_09 ↑ 32.9 32.8 N/A N/A N/A 98% 98% 0.00 1.00 North North N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A		Living Room	W2_09 ↑	31.8	31.6	N/A	N/A	98%	98%	0.02	1.00	North	North	N/A	N/A	North	North	N/A
Living Room W2_12 ← 30.2 30.1 N/A N/A 100% 100% 0.00 1.00 North North N/A N/A North North N/A N/A North North N/A N/A Room; Living Room W3_01 ↑ 33.1 32.9 N/A N/A N/A N/A N/A N/A North North N/A N/A North North N/A N/A North North N/A N/A N/A North North N/A N/A N/A North North N/A N/A Room; Living Room W3_04 ↑ 33.1 32.9 N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	Room €	Living Room	W2_10 ↑	31.7	31.6	N/A	N/A											
Room î         Living Room         W2_13 ←         25.5         25.5         0.0         1.00           Living Room         W2_14 ←         21.7         21.7         0.0         1.00         88%         88%         0.00         1.00         North         North         N/A		Living Room	W2_11 ←	30.9	30.9	N/A	N/A											
Living Room W2_14 ← 21.7 21.7 0.0 1.00 88% 88% 0.00 1.00 North North N/A N/A North North N/A  ThirdRoom 1 Living Room W3_01 ↑ 33.1 32.9 N/A N/A 76% 73% 0.54 0.96 North North N/A N/A North North N/A  Room 2 Living Room W3_02 ↑ 33.1 33.0 N/A N/A  Living Room W3_03 ↑ 33.1 32.9 N/A N/A 98% 98% 0.00 1.00 North North N/A N/A North North N/A  Room 3 Living Room W3_04 ↑ 33.1 32.9 N/A N/A  Living Room W3_05 ↑ 33.1 32.9 N/A N/A 98% 98% 0.00 1.00 North North N/A N/A North North N/A  Room 4 Living Room W3_06 ↑ 33.0 32.9 N/A N/A  Living Room W3_07 ↑ 33.0 32.8 N/A N/A 98% 98% 0.01 1.00 North North N/A N/A North North N/A  Room 4 Living Room W3_08 ↑ 33.0 32.8 N/A N/A 98% 98% 0.01 1.00 North North N/A N/A N/A North North N/A  Room 4 Living Room W3_09 ↑ 32.9 32.8 N/A N/A 98% 98% 0.00 1.00 North North N/A N/A N/A North North N/A  Room 6 Living Room W3_09 ↑ 32.9 32.8 N/A N/A 98% 98% 0.00 1.00 North North N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A		Living Room	W2_12 ←	30.2	30.1	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Third Room 1 Living Room	Room 7	Living Room	W2_13 ←	25.5	25.5	0.0	1.00											
Room 2         Living Room         W3_02 ↑         33.1         33.0         N/A         N/A           Living Room         W3_03 ↑         33.1         32.9         N/A         N/A         98%         98%         0.00         1.00         North         North         N/A		Living Room	W2_14 ←	21.7	21.7	0.0	1.00	88%	88%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Living Room W3_03 ↑ 33.1 32.9 N/A N/A 98% 98% 0.00 1.00 North North N/A N/A North North N/A N/A North North N/A N/A North North N/A N/A North North N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	Third Room 1	Living Room	W3_01 ↑	33.1	32.9	N/A	N/A	76%	73%	0.54	0.96	North	North	N/A	N/A	North	North	N/A
Room €         Living Room         W3_04 ↑         33.1         32.9         N/A         N/A         98%         98%         0.00         1.00         North         North         N/A         N/A         N/A           Room 4         Living Room         W3_06 ↑         33.0         32.9         N/A	Room 2	Living Room	W3_02 ↑	33.1	33.0	N/A	N/A											
Living Room W3_05 ↑ 33.1 32.9 N/A N/A 98% 98% 0.00 1.00 North North N/A N/A North North N/A N/A North North N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A		Living Room	W3_03 ↑	33.1	32.9	N/A	N/A	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Room ⁴         Living Room         W3_06 ↑         33.0         32.9         N/A         N/A         98%         98%         0.01         1.00         North         North         N/A         N/A         N/A           Room €         Living Room         W3_08 ↑         33.0         32.8         N/A	Room (	Living Room	W3_04 ↑	33.1	32.9	N/A	N/A											
Living Room W3_07 ↑ 33.0 32.8 N/A N/A 98% 98% 0.01 1.00 North North N/A N/A North North N/A Room € Living Room W3_08 ↑ 33.0 32.8 N/A N/A N/A 98% 98% 0.00 1.00 North North N/A N/A North North N/A N/A Room € Living Room W3_10 ↑ 32.8 32.7 N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A		Living Room	W3_05 ↑	33.1	32.9	N/A	N/A	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Room €         Living Room         W3_08 ↑         33.0         32.8         N/A         N/A         98%         98%         0.00         1.00         North         North         N/A         N/A           Living Room         W3_09 ↑         32.8         32.8         N/A         N/A         98%         98%         0.00         1.00         North         North         N/A         N/A           Room €         Living Room         W3_10 ↑         32.8         32.7         N/A         N/A	Room ₄	Living Room	W3_06 ↑	33.0	32.9	N/A	N/A											
Living Room W3_09 ↑ 32.9 32.8 N/A N/A 98% 98% 0.00 1.00 North North N/A N/A North North N/A Room € Living Room W3_10 ↑ 32.8 32.7 N/A N/A		Living Room	W3_07 ↑	33.0	32.8	N/A	N/A	98%	98%	0.01	1.00	North	North	N/A	N/A	North	North	N/A
Room € Living Room W3_10 ↑ 32.8 32.7 N/A N/A	Room t	Living Room	W3_08 ↑	33.0	32.8	N/A	N/A											
		Living Room	W3_09 ↑	32.9	32.8	N/A	N/A	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Living Room W3_11 ← 33.9 33.8 N/A N/A 97% 97% 0.00 1.00 North North N/A N/A North North N/A	Room (	Living Room	W3_10 ↑	32.8	32.7	N/A	N/A											
		Living Room	W3_11 ←	33.9	33.8	N/A	N/A	97%	97%	0.00	1.00	North	North	N/A	N/A	North	North	N/A

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Property, room	& window attribut	tes		VS	SC			N:	SL				AF	SH (roc	om)		
Floor Room Ro	om usa	Window	Exis. (%	Prop. <i>(%</i>	Loss (%	Pro./Ex	Exis.	Prop.	Loss	Pro./E	F	Annual (	%APSF	1)	Wint	er (%AF	PSH)
TIOOT ROOM RO	om use	Ref./Orientatio n	VSC)	VSC)	VSC)	. ratio	(% rm)	(% rm)	(m <sup>2</sup> )	x. ratio	Exis.	Prop.	Loss	Pro./Ex	Exis.	Prop.	Pro./Ex
Room 7	Living Room	W3_12 ←	32.1	32.0	N/A	N/A	95%	95%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Sandbourne																	
Secon@oom 1	Living Room	W2_01 ↑	24.7	24.6	0.1	1.00											
	Living Room	W2_02 ↑	28.0	27.9	N/A	N/A	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Room 2	Living Room	W2_03 ↑	29.7	29.6	N/A	N/A	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Room (	Living Room	W2_04 ↑	31.0	30.9	N/A	N/A											
	Living Room	W2_05 ↑	31.3	31.1	N/A	N/A	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Room ₄	Living Room	W2_06 ↑	31.4	31.3	N/A	N/A											
	Living Room	W2_07 ↑	31.4	31.3	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Room t	Living Room	W2_08 ↑	31.3	31.2	N/A	N/A											
	Living Room	W2_09 ↑	31.2	31.1	N/A	N/A	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Room (	Living Room	W2_10 ↑	33.3	33.2	N/A	N/A	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Room 7	Living Room	W2_11 ↑	33.1	33.0	N/A	N/A											
	Living Room	W2_12 ↑	33.0	32.9	N/A	N/A	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Room {	Living Room	W2_13 ↑	32.8	32.7	N/A	N/A											
	Living Room	W2_14 ↑	32.8	32.7	N/A	N/A	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Room §	Living Room	W2_15 ↑	32.7	32.6	N/A	N/A	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Room 1	Living Room	W2_16 ↑	32.6	32.5	N/A	N/A											
	Living Room	W2_17 ↑	32.5	32.4	N/A	N/A	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Room 1	Living Room	W2_18 ↑	32.5	32.4	N/A	N/A	96%	96%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Third Room 1	Living Room	W3_01 ↑	31.7	31.6	N/A	N/A											
	Living Room	W3_02 ↑	32.5	32.4	N/A	N/A	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Room 2	Living Room	W3_03 ↑	32.9	32.8	N/A	N/A	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Room (	Living Room	W3_04 ↑	33.1	33.0	N/A	N/A											
	Living Room	W3_05 ↑	33.1	32.9	N/A	N/A	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Room 4	Living Room	W3_06 ↑	33.0	32.9	N/A	N/A	67%	67%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Room t	Living Room	W3_07 ↑	32.9	32.8	N/A	N/A	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A

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Property, room	n & window attribu	ıtes			V	SC			NS	SL				AP	SH (ro	om)		
Floor Room Ro	oom use		ndow rientatio	Exis. (%	Prop. (%	Loss (%	Pro./Ex	Exis.	Prop.	Loss	Pro./E		Annual (				er (%AF	
2 (	1:: 5		n	VSC)	VSC)	VSC)	. ratio	(% rm)	(% rm)	(m²)	x. ratio	Exis.	Prop.	Loss	Pro./Ex	Exis.	Prop. I	Pro./Ex
Room (	Living Room	W3_08		32.8	32.6	N/A	N/A	000/	000/	0.00	4.00	NI = =tl=	Manth	N 1 / A	N1/Λ	N I = otl-	N I = t I=	N1/A
2	Living Room	W3_09		32.7	32.5	N/A	N/A	98%	98%	0.00	1.00		North	N/A	N/A		North	N/A
Room 7	Living Room	W3_10		34.6	34.5	N/A	N/A	82%	82%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Room {	Living Room	W3_11		34.5	34.4	N/A	N/A	000/	000/	0.00	4.00	Nlauth	Nlauth	Ν1/Λ	Ν1/Λ	Nouth	Nauth	NI/A
D (	Living Room	W3_12		34.5	34.4	N/A	N/A	99%	99%	0.00	1.00	NORTH	North	N/A	N/A	North	NORTH	N/A
Room (	Living Room	W3_13		34.5	34.4	N/A	N/A	000/	000/	0.00	1.00	North	North	NI/A	NI/A	North	North	NI/A
) n n m d	Living Room	W3_14		34.5	34.4	N/A N/A	N/A N/A	98% 96%	98% 96%	0.00	1.00		North	N/A N/A	N/A	North		N/A
Room 1	Living Room	W3_15		34.5	34.4	N/A	N/A N/A	90%	90%	0.00	1.00	NOITH	North	IN/A	N/A	North	NOITH	N/A
Room 1	Living Room Living Room	W3_16 W3_17		34.4	34.3	N/A	N/A	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
Room 1	Living Room Living Room	W3_18		34.3	34.2	N/A	N/A	96%	96%	0.00	1.00		North	N/A	N/A		North	N/A
COOIII I	Living Room	W 3_10	)	34.3	34.2	IN/A	IN/A	90%	90%	0.00	1.00	NOILII	NOILII	IN/A	IN/A	NOILII	NOILII	IN/A
Abbey Rd_Pha	ise 1																	
Ground R1	Bedroom	W1	K	18.2	18.0	0.2	0.99											
	Bedroom	W2	K	28.3	27.8	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R2	Bedroom	W3	abla	28.7	28.1	N/A	N/A	96%	96%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R3	Bedroom	W4	↸	31.1	29.9	N/A	N/A											
	Bedroom	W5	abla	30.7	29.1	N/A	N/A	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R4	Bedroom	W6	K	19.3	15.7	3.7	0.81											
	Bedroom	W7	K	29.1	24.6	4.6	0.84	97%	97%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R5	Kitchen	W8	K	29.2	23.7	5.4	0.81											
	Kitchen	W9	abla	23.4	17.4	6.0	0.74	99%	89%	1.87	0.90	North	North	N/A	N/A	North	North	N/A
R6	Bedroom	W10	↸	30.2	22.6	7.6	0.75											
	Bedroom	W11	abla	29.5	21.2	8.2	0.72	99%	82%	4.72	0.83	North	North	N/A	N/A	North	North	N/A
R7	Bedroom	W12	K	16.2	9.9	6.3	0.61											
	Bedroom	W13	abla	26.2	17.3	8.9	0.66	97%	56%	10.00	0.58	North	North	N/A	N/A	North	North	N/A
R8	Kitchen	W14	K	26.0	17.6	8.4	0.68											
	Kitchen	W15	abla	17.5	11.6	5.9	0.66	91%	72%	3.80	0.78	North	North	N/A	N/A	North	North	N/A

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Property,	room & window attribut	es			VS	SC			NS	SL				AP	SH (roc	m)		
Floor Roo	om Room use		idow	Exis. (%	Prop. <i>(%</i>	Loss (%	Pro./Ex	Exis.	Prop.	Loss	Pro./E	F	Annual (	%APSH	f)	Wint	er (%AF	PSH)
1 1001 1100	THE TROOM GOO	Ref./O	rientatio n	VSC)	VSC)	VSC)	. ratio	(% rm)	(% rm)	(m <sup>2</sup> )	x. ratio	Exis.	Prop.	Loss	Pro./Ex	Exis.	Prop.	Pro./Ex
First R1	1 Bedroom	W1	K	21.3	21.0	0.2	0.99	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R2	2 Bedroom	W2		33.2	32.7	N/A	N/A	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R	Bedroom	W3	↸	33.8	33.1	N/A	N/A	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R4	4 KD	W4	↸	26.1	25.6	0.6	0.98	95%	95%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R5	5 KD	W5	↸	34.2	33.0	N/A	N/A	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R	Bedroom	W6	abla	33.9	32.4	N/A	N/A	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R7	7 Bedroom	W7	↸	21.5	21.2	0.3	0.98	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R	Bedroom	W8		34.4	32.0	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R9	9 Bedroom	W9	↸	21.8	18.3	3.5	0.84	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R1	0 Bedroom	W10		33.2	28.3	N/A	N/A	99%	91%	1.02	0.92	North	North	N/A	N/A	North	North	N/A
R1	1 Bedroom	W11	↸	33.5	27.8	N/A	N/A	98%	86%	1.39	0.88	North	North	N/A	N/A	North	North	N/A
R1	2 KD	W12	K	25.8	20.0	5.7	0.78	95%	69%	3.21	0.73	North	North	N/A	N/A	North	North	N/A
R1	3 KD	W13	K	33.2	25.7	7.6	0.77	99%	74%	3.79	0.75	North	North	N/A	N/A	North	North	N/A
R1	4 Bedroom	W14	K	32.7	24.2	8.4	0.74	99%	62%	4.60	0.63	North	North	N/A	N/A	North	North	N/A
R1	5 Bedroom	W15	K	21.2	14.3	6.9	0.67	99%	68%	2.67	0.69	North	North	N/A	N/A	North	North	N/A
R1	6 Bedroom	W16		32.5	22.6	9.8	0.70	100%	48%	6.83	0.48	North	North	N/A	N/A	North	North	N/A
R1	7 Bedroom	W17	K	19.0	11.9	7.1	0.63	100%	61%	3.14	0.61	North	North	N/A	N/A	North	North	N/A
R1	8 Bedroom	W18	K	29.8	20.0	9.8	0.67	94%	48%	6.01	0.51	North	North	N/A	N/A	North	North	N/A
R1	9 Bedroom	W19	K	29.4	20.1	9.4	0.68	92%	57%	4.26	0.62	North	North	N/A	N/A	North	North	N/A
R2	0 KD	W20		19.6	13.7	5.9	0.70	79%	71%	1.03	0.89	North	North	N/A	N/A	North	North	N/A
R2	1 Bedroom	W21	K	29.7	21.5	8.2	0.72	93%	65%	4.11	0.70	North	North	N/A	N/A	North	North	N/A
R2	2 Bedroom	W22		29.1	21.3	7.8	0.73	90%	81%	1.05	0.90	North	North	N/A	N/A	North	North	N/A
R2	3 Bedroom	W23	K	27.8	18.8	9.0	0.68	81%	76%	0.69	0.94	North	North	N/A	N/A	North	North	N/A
R2	4 Bedroom	W24	K	27.8	17.5	10.3	0.63	93%	67%	3.89	0.72	North	North	N/A	N/A	North	North	N/A
R2	5 Bedroom	W25	K	28.1	16.2	12.0	0.57	95%	39%	7.88	0.42	North	North	N/A	N/A	North	North	N/A
R2	6 Bedroom	W26	abla	28.2	15.5	12.8	0.55	86%	33%	6.38	0.38	North	North	N/A	N/A	North	North	N/A
R2	7 Bedroom	W27	K	27.8	14.5	13.2	0.52	77%	27%	6.83	0.34	North	North	N/A	N/A	North	North	N/A
R2	8 Bedroom	W28	↸	27.6	15.0	12.5	0.55											

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	rty, roon	n & window attribu	ites			VS	SC SC			NS	SL .				AF	SH (roc	om)		
Floor	Room Ro	oom use		ndow rientatio	Exis. (% VSC)	Prop. (% VSC)	Loss (% VSC)	Pro./Ex . ratio	Exis. (% rm)	Prop. (% rm)	Loss (m²)	Pro./E x. ratio	Exis.	Annual <i>(</i> Prop.		<i>⊣)</i> Pro./Ex		er <i>(%Al</i> Prop.	PSH) Pro./Ex
		Bedroom	W29	7	10.0	9.3	0.7	0.93	91%	76%	2.40	0.83	North	North	N/A	N/A		North	
	R29	KD	W30	K	15.0	9.7	5.3	0.65	50%	28%	2.64	0.56	North	North	N/A	N/A	North	North	N/A
	R30	Bedroom	W31	K	21.8	13.2	8.6	0.61	77%	43%	4.17	0.56	North	North	N/A	N/A	North	North	N/A
	R31	LKD	W32	abla	27.0	18.5	8.6	0.68											
		LKD	W33	K	27.2	18.8	8.4	0.69											
		LKD	W34	$\uparrow$	27.4	24.2	3.2	0.88	100%	99%	0.24	0.99	North	North	N/A	N/A	North	North	N/A
	R32	Bedroom	W35	$\uparrow$	5.7	5.5	0.2	0.97	92%	92%	0.08	0.99	North	North	N/A	N/A	North	North	N/A
Secon	R1	Bedroom	W1	↸	23.1	23.0	0.1	0.99	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Bedroom	W2	↸	35.3	34.9	N/A	N/A	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R3	Bedroom	W3	K	35.7	35.2	N/A	N/A	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R4	KD	W4	K	27.6	27.2	N/A	N/A	95%	95%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R5	KD	W5		35.9	35.0	N/A	N/A	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R6	Bedroom	W6	K	35.5	34.5	N/A	N/A	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R7	Bedroom	W7	↸	22.7	22.5	0.2	0.99	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R8	Bedroom	W8	↖	35.9	34.1	N/A	N/A	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R9	Bedroom	W9	K	22.8	20.2	2.6	0.89	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R10	Bedroom	W10	K	34.8	31.0	N/A	N/A	99%	97%	0.20	0.98	North	North	N/A	N/A	North	North	N/A
	R11	Bedroom	W11	K	35.1	30.5	N/A	N/A	98%	98%	0.06	1.00	North	North	N/A	N/A	North	North	N/A
	R12	KD	W12		27.0	22.5	4.5	0.83	95%	87%	0.95	0.92	North	North	N/A	N/A	North	North	N/A
	R13	KD	W13		34.8	28.7	N/A	N/A	99%	94%	0.82	0.95	North	North	N/A	N/A	North	North	N/A
	R14	Bedroom	W14		34.3	27.3	N/A	N/A	99%	90%	1.13	0.91		North	N/A	N/A	North	North	N/A
	R15	Bedroom	W15		22.3	16.7	5.5	0.75	99%	94%	0.46	0.95	North	North	N/A	N/A		North	N/A
	R16	Bedroom	W16	K	34.1	25.7	8.4	0.75	98%	71%	3.57	0.72	North	North	N/A	N/A	North	North	N/A
	R17	Bedroom	W17		20.5	14.2	6.4	0.69	100%	75%	2.01	0.75		North	N/A	N/A	North		N/A
	R18	Bedroom	W18		31.9	23.0	8.9	0.72	98%	55%	5.66	0.56		North	N/A	N/A		North	N/A
	R19	Bedroom	W19		31.7	22.9	8.7	0.72	98%	63%	4.23	0.64		North	N/A	N/A	North	North	N/A
	R20	KD	W20		21.3	15.8	5.5	0.74	92%	75%	2.07	0.82	North	North	N/A	N/A	North	North	N/A
	R21	Bedroom	W21	K	32.1	24.3	7.8	0.76	96%	74%	3.17	0.77	North	North	N/A	N/A	North	North	N/A

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Prope	rty, room	& window attribu	utes			VS	SC			NS	SL				AP	SH (roc	om)		
<b>-</b>			Win	idow	Exis.	Prop.	Loss	Pro./Ex	Exis.	Prop.	Loss	Pro./E	Д	nnual (	)	Wint	er (%AF	PSH)	
Floor	Room Roo	om use	Ref./O	rientatio n	(% VSC)	(% VSC)	(% VSC)	. ratio	(% rm)	(% rm)	(m <sup>2</sup> )	x. ratio	Exis.	Prop.	Loss	Pro./Ex	Exis.	Prop. I	Pro./E
	R22	Bedroom	W22	K	31.5	23.9	7.7	0.76	98%	88%	1.25	0.90	North	North	N/A	N/A	North	North	N/A
	R23	Bedroom	W23	abla	30.2	21.2	9.1	0.70	96%	82%	1.86	0.85	North	North	N/A	N/A	North	North	N/A
	R24	Bedroom	W24	↸	30.2	19.8	10.4	0.66	98%	72%	3.99	0.73	North	North	N/A	N/A	North	North	N/A
	R25	Bedroom	W25	abla	30.4	18.3	12.0	0.60	98%	43%	7.92	0.43	North	North	N/A	N/A	North	North	N/A
	R26	Bedroom	W26	↸	30.4	17.5	13.0	0.57	94%	37%	6.86	0.39	North	North	N/A	N/A	North	North	N/A
	R27	Bedroom	W27	abla	29.9	16.1	13.8	0.54	85%	29%	7.38	0.35	North	North	N/A	N/A	North	North	N/A
	R28	Bedroom	W28	↸	29.6	16.4	13.2	0.55											
		Bedroom	W29	7	10.5	9.7	8.0	0.92	92%	76%	2.54	0.83	North	North	N/A	N/A	North	North	N/A
	R29	KD	W30	↸	16.3	10.5	5.8	0.64	57%	29%	3.31	0.52	North	North	N/A	N/A	North	North	N/A
	R30	Bedroom	W31	abla	23.6	14.6	9.0	0.62	82%	50%	3.97	0.61	North	North	N/A	N/A	North	North	N/A
	R31	LKD	W32	K	29.0	19.9	9.1	0.69											
		LKD	W33	K	29.1	20.2	8.9	0.69											
		LKD	W34	$\uparrow$	28.5	25.1	3.4	0.88	100%	99%	0.31	0.99	North	North	N/A	N/A	North	North	N/A
	R32	Bedroom	W35	$\uparrow$	5.9	5.7	0.2	0.97	92%	92%	0.08	0.99	North	North	N/A	N/A	North	North	N/A
Third	R1	Bedroom	W1	K	24.2	24.2	0.1	1.00	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Bedroom	W2	abla	36.8	36.5	N/A	N/A	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R3	Bedroom	W3	↸	37.2	36.8	N/A	N/A	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R4	KD	W4		28.8	28.5	N/A	N/A	95%	95%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R5	KD	W5	abla	37.2	36.6	N/A	N/A	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R6	Bedroom	W6	↸	36.9	36.1	N/A	N/A	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R7	Bedroom	W7	↸	23.5	23.4	0.1	0.99	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R8	Bedroom	W8	↸	37.1	35.9	N/A	N/A	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R9	Bedroom	W9	abla	23.5	21.8	1.7	0.93	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R10	Bedroom	W10		36.0	33.3	N/A	N/A	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R11	Bedroom	W11	K	36.3	33.0	N/A	N/A	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R12	KD	W12	↸	27.9	24.8	3.1	0.89	95%	94%	0.12	0.99	North	North	N/A	N/A	North	North	N/A
	R13	KD	W13	K	36.1	31.6	N/A	N/A	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R14	Bedroom	W14	abla	35.7	30.4	N/A	N/A	99%	99%	0.03	1.00	North	North	N/A	N/A	North	North	N/A

Date: 12/04/2022 Scheme: SR\_08/04/2022

Scenario: Existing Vs Proposed



R15	Property, room & window attributes						VSC					SL		APSH (room)							
R15 Bedroom W15 \(\times\) 23.2 \(\dots\) 29.2 \(\dots\) 4.0 \(\dots\) 83 \(\dots\) 99% \(\dots\) 0.11 \(\dots\) 0.99 \(\dots\) North Nort	Floor I	Room Ro	oom use											F	Annual (	%APSH	<i>(</i> )	Wint	er (%AF	PSH)	
R16   Bedroom   W16   K   35.6   29.1   N/A   N/A   98%   79%   2.46   0.81   North   N/A   N/A   N/A   North   N/A   N/A   R17   Bedroom   W17   K   21.9   16.6   5.3   0.76   100%   99%   0.09   0.09   North   North   N/A   N/A   North   N/A   N/A   R18   Bedroom   W18   K   33.8   26.3   7.5   0.78   88%   69%   3.82   0.70   North   North   N/A   North   North   N/A   North   N/A   R19   Bedroom   W19   K   33.7   26.1   7.6   0.77   98%   78%   2.45   0.79   North   North   N/A   N/A   North   North   N/A   R20   KD   W20   K   23.0   18.1   4.9   0.79   29%   83%   11.3   0.99   North   North   N/A   N/A   North   North   N/A   R21   Bedroom   W21   K   34.3   27.3   N/A   N/A   96%   89%   1.09   0.92   North   North   N/A   N/A   North   North   N/A   R22   Bedroom   W22   K   33.9   26.7   7.2   0.79   98%   89%   0.93   0.93   North   North   N/A   North   North   N/A   R23   Bedroom   W22   K   32.5   22.3   10.1   0.69   98%   7.4%   3.62   0.76   North   North   N/A   North   North   N/A   R24   Bedroom   W26   K   32.4   20.8   11.6   0.64   99%   7.4%   3.62   0.76   North   North   N/A   N/A   North   North   N/A   R25   Bedroom   W26   K   32.4   19.7   12.7   0.61   98%   43%   6.54   0.44   North   North   N/A   N/A   North   North   N/A   R26   Bedroom   W27   K   32.0   17.8   14.2   0.56   85%   34%   8.17   0.36   North   North   N/A   N/A   North   North   N/A   R28   Bedroom   W28   K   31.6   18.0   13.6   0.57   Sedroom   W28   K   31.6   18.0   13.6   0.57   Sedroom   W28   K   31.1   21.5   9.6   0.69   93%   7.7%   2.56   0.83   North   North   N/A   N/A   North   North   N/A   North   North   N/A   North   N/A   N/A   North   N/A   N/A   North   N/A   N/A   North   N/A   N/A   North   N/A   N/A   North   N/A   N/A   North   N/A   N/A   North   N/A   N/A   North   N/A   N/A   North   N/A   N/A   North   N/A   N/A   North   N/A   N/A   North   N/A   N/A   North   N/A   N/A   North   N/A   N/A   North   N/A   N/A   North   N/A   N/A   North   N/A   N/A   North   N/A   N/A   North	. 1001			Rei./Oi	n				. ratio	(% rm)	(% rm)	(m <sup>2</sup> )	x. ratio	Exis.	Prop.	Loss	Pro./Ex	Exis.	Prop.	Pro./Ex	
R17         Bedroom         W17         R         21.9         16.6         5.3         0.76         100%         99%         0.09         0.99         North         N/A         N/A         North         N/A		R15	Bedroom	W15	abla	23.2	19.2	4.0	0.83	99%	98%	0.11	0.99	North	North	N/A	N/A	North	North	N/A	
R18		R16	Bedroom	W16	K	35.6	29.1	N/A	N/A	98%	79%	2.46	0.81	North	North	N/A	N/A	North	North	N/A	
R19		R17	Bedroom	W17	K	21.9	16.6	5.3	0.76	100%	99%	0.09	0.99	North	North	N/A	N/A	North	North	N/A	
R20         KD         W20         R         23.0         18.1         4.9         0.79         92%         83%         1.13         0.90         North         N/A         N/A         N/A         N/A         N/A         N/A         96%         89%         1.09         0.92         North         N/A         96%         89%         1.09         0.92         North         N/A		R18	Bedroom	W18	K	33.8	26.3	7.5	0.78	98%	69%	3.82	0.70	North	North	N/A	N/A	North	North	N/A	
R21         Bedroom         W21         R         34.3         27.3         N/A         N/A         96%         89%         1.09         0.92         North         N/A         N/A         N/A           R22         Bedroom         W22         R         33.9         26.7         7.2         0.79         98%         96%         0.00         1.00         North         N/A         N/A         North         N/A         North         N/A         North		R19	Bedroom	W19	↸	33.7	26.1	7.6	0.77	98%	78%	2.45	0.79	North	North	N/A	N/A	North	North	N/A	
R22         Bedroom         W22         Noverable of the control of the cont		R20	KD	W20		23.0	18.1	4.9	0.79	92%	83%	1.13	0.90	North	North	N/A	N/A	North	North	N/A	
R23         Bedroom         W23         R         32.6         23.8         8.8         0.73         96%         89%         0.93         0.93         North         North         N/A         N/A         North         North         N/A         North         North         N/A         North         North         North         N/A         North         N/A         North         N/A         North         N/A         N/A         North         N/A         North         N/A         North         North         N/A         North		R21	Bedroom	W21	↸	34.3	27.3	N/A	N/A	96%	89%	1.09	0.92	North	North	N/A	N/A	North	North	N/A	
R24         Bedroom         W24         R         32.5         22.3         10.1         0.69         98%         74%         3.62         0.76         North         N/A         N/A         North         N/A         N/A		R22	Bedroom	W22	abla	33.9	26.7	7.2	0.79	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A	
R25         Bedroom         W25         N         32.4         20.8         11.6         0.64         99%         49%         7.14         0.49         North         North         N/A         N/A         N/A         N/A         North         N/A         N/A         N/A         North         N/A         N/A <th></th> <th>R23</th> <th>Bedroom</th> <th>W23</th> <th>↸</th> <th>32.6</th> <th>23.8</th> <th>8.8</th> <th>0.73</th> <th>96%</th> <th>89%</th> <th>0.93</th> <th>0.93</th> <th>North</th> <th>North</th> <th>N/A</th> <th>N/A</th> <th>North</th> <th>North</th> <th>N/A</th>		R23	Bedroom	W23	↸	32.6	23.8	8.8	0.73	96%	89%	0.93	0.93	North	North	N/A	N/A	North	North	N/A	
R26         Bedroom         W26         K         32.4         19.7         12.7         0.61         98%         43%         6.54         0.44         North         North         N/A         North         North         N/A         North         North         N/A         North         North         N/A         North         N/A         North         N/A         North         N/A         North         N/A         North         N/A         North         N/A         North         N/A         North         N/A         Nort		R24	Bedroom	W24	abla	32.5	22.3	10.1	0.69	98%	74%	3.62	0.76	North	North	N/A	N/A	North	North	N/A	
R27         Bedroom         W27         K         32.0         17.8         14.2         0.56         95%         34%         8.17         0.36         North         North         N/A         North         North         N/A         North         North         N/A         North         N/A         North         North         N/A         North         North         N/A         N/A         North         N/A         N/A         North         N/A         N/A         North         N/A         N/A         N/A         N/A         N/A         N/A<		R25	Bedroom	W25	K	32.4	20.8	11.6	0.64	99%	49%	7.14	0.49	North	North	N/A	N/A	North	North	N/A	
R28         Bedroom         W28		R26	Bedroom	W26	abla	32.4	19.7	12.7	0.61	98%	43%	6.54	0.44	North	North	N/A	N/A	North	North	N/A	
Bedroom   W29     11.0   10.1   0.9   0.92   93%   77%   2.56   0.83   North   North   N/A   N/A   N/A		R27	Bedroom	W27	abla	32.0	17.8	14.2	0.56	95%	34%	8.17	0.36	North	North	N/A	N/A	North	North	N/A	
R29 KD W30 \		R28	Bedroom	W28	abla	31.6	18.0	13.6	0.57												
R30 Bedroom W31 \ \ 25.9 16.6 9.3 0.64 92% 58% 4.21 0.63 North North N/A N/A North North N/A R31 LKD W32 \ 31.1 21.5 9.6 0.69 LKD W33 \ 31.2 21.7 9.5 0.70 LKD W34 \ 29.6 26.1 3.6 0.88 100% 99% 0.32 0.99 North North N/A N/A North North N/A N/A North North N/A N/A North North N/A N/A North North N/A R32 Bedroom W35 \ 6.2 6.0 0.1 0.98 92% 92% 0.07 0.99 North North N/A N/A North North N/A N/A North North N/A R2 Bedroom W2 \ 37.6 37.4 N/A N/A N/A N/A 98% 98% 0.00 1.00 North North N/A N/A North North N/A R3 Bedroom W3 \ 38.0 37.7 N/A N/A 98% 98% 0.00 1.00 North North N/A N/A N/A North North N/A R4 KD W4 \ 29.5 29.3 N/A N/A 95% 95% 0.00 1.00 North North N/A N/A N/A North North N/A R5 KD W5 \ 38.0 37.6 N/A N/A N/A 99% 99% 0.00 1.00 North North N/A N/A North North N/A R6 Bedroom W6 \ 37.6 37.1 N/A N/A 99% 99% 0.00 1.00 North North N/A N/A North North N/A N/A North North N/A N/A R6 Bedroom W6 \ 37.6 37.1 N/A N/A N/A 98% 98% 0.00 1.00 North North N/A N/A North North N/A N/A N/A North North N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A			Bedroom	W29	7	11.0	10.1	0.9	0.92	93%	77%	2.56	0.83	North	North	N/A	N/A	North	North	N/A	
R31 LKD W32 \(\sigma\) 31.1 21.5 9.6 0.69  LKD W33 \(\sigma\) 31.2 21.7 9.5 0.70  LKD W34 \(\gamma\) 29.6 26.1 3.6 0.88 100% 99% 0.32 0.99 North North N/A N/A North North N/A  R32 Bedroom W35 \(\gamma\) 6.2 6.0 0.1 0.98 92% 92% 0.07 0.99 North North N/A N/A North North N/A  Fourth R1 Bedroom W1 \(\sigma\) 24.8 24.7 0.0 1.00 100% 100% 0.00 1.00 North North N/A N/A North North N/A  R2 Bedroom W2 \(\sigma\) 37.6 37.4 N/A N/A 98% 98% 0.00 1.00 North North N/A N/A North North N/A  R3 Bedroom W3 \(\sigma\) 38.0 37.7 N/A N/A 98% 98% 0.00 1.00 North North N/A N/A North North N/A  R4 KD W4 \(\sigma\) 29.5 29.3 N/A N/A 95% 95% 0.00 1.00 North North N/A N/A North North N/A  R5 KD W5 \(\sigma\) 38.0 37.6 N/A N/A 99% 99% 0.00 1.00 North North N/A N/A North North N/A  R6 Bedroom W6 \(\sigma\) 37.6 37.1 N/A N/A 98% 98% 0.00 1.00 North North N/A N/A North North N/A  N6 North North N/A N/A North North N/A		R29	KD	W30	abla	18.1	11.9	6.2	0.66	71%	31%	4.85	0.43	North	North	N/A	N/A	North	North	N/A	
LKD       W33       \backsigned{3}       31.2       21.7       9.5       0.70         LKD       W34       \backsigned{\backsigned{2}}       29.6       26.1       3.6       0.88       100%       99%       0.32       0.99       North       North       N/A       North       N/A       North       N/A       North       N/A       N/A       North       N/A       N		R30	Bedroom	W31	K	25.9	16.6	9.3	0.64	92%	58%	4.21	0.63	North	North	N/A	N/A	North	North	N/A	
LKD         W34 ↑         29.6         26.1         3.6         0.88         100%         99%         0.32         0.99         North         N/A         N/A         North         N/A         North         N/A         N/A         North         N/A         N/A         North         N/A         N/A         North         N/A         N/A <th></th> <th>R31</th> <th>LKD</th> <th>W32</th> <th>abla</th> <th>31.1</th> <th>21.5</th> <th>9.6</th> <th>0.69</th> <th></th>		R31	LKD	W32	abla	31.1	21.5	9.6	0.69												
R32         Bedroom         W35 ↑         6.2         6.0         0.1         0.98         92%         92%         0.07         0.99         North         N/A         N/A         North         N/A           Fourth         R1         Bedroom         W1 ⋉         24.8         24.7         0.0         1.00         100%         100%         0.00         1.00         North         North         N/A         N/A         N/A           R2         Bedroom         W2 ⋉         37.6         37.4         N/A         N/A         98%         98%         0.00         1.00         North         N/A         N/A         N/A           R3         Bedroom         W3 ⋉         38.0         37.7         N/A         N/A         98%         98%         0.00         1.00         North         N/A         N/A         N/A           R4         KD         W4 ⋉         29.5         29.3         N/A         N/A         95%         95%         0.00         1.00         North         N/A         N/A         N/A           R5         KD         W5 ⋉         38.0         37.6         N/A         N/A         98%         98%         0.00         1.00 <td< th=""><th></th><th></th><th>LKD</th><th>W33</th><th>↸</th><th>31.2</th><th>21.7</th><th>9.5</th><th>0.70</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></td<>			LKD	W33	↸	31.2	21.7	9.5	0.70												
Fourth         R1         Bedroom         W1         C         24.8         24.7         0.0         1.00         100%         100%         0.00         1.00         North         North         N/A         N/A         N/A           R2         Bedroom         W2         \$\bar{\chi}\$         37.6         37.4         N/A         N/A         98%         98%         0.00         1.00         North         North         N/A         N/A         N/A         98%         98%         0.00         1.00         North         N/A			LKD	W34	$\uparrow$	29.6	26.1	3.6	0.88	100%	99%	0.32	0.99	North	North	N/A	N/A	North	North	N/A	
R2       Bedroom       W2 \backsquare{\cappa}       37.6       37.4       N/A       N/A       98%       98%       0.00       1.00       North       North       N/A       N/A       N/A         R3       Bedroom       W3 \backsquare{\cappa}       38.0       37.7       N/A       N/A       98%       98%       0.00       1.00       North       North       N/A       N/A       N/A         R4       KD       W4 \bar{\cappa}       29.5       29.3       N/A       N/A       95%       95%       0.00       1.00       North       North       N/A       North       N/A         R5       KD       W5 \bar{\cappa}       38.0       37.6       N/A       N/A       99%       99%       0.00       1.00       North       North       N/A       N/A       N/A         R6       Bedroom       W6 \bar{\cappa}       37.6       37.1       N/A       N/A       98%       98%       0.00       1.00       North       North       N/A       N/A       N/A		R32	Bedroom	W35	$\uparrow$	6.2	6.0	0.1	0.98	92%	92%	0.07	0.99	North	North	N/A	N/A	North	North	N/A	
R3 Bedroom W3 \( \bar{\sigma} \) 38.0 37.7 N/A N/A 98% 98% 0.00 1.00 North North N/A N/A North North N/A N/A R4 KD W4 \( \bar{\sigma} \) 29.5 29.3 N/A N/A 95% 95% 0.00 1.00 North North N/A N/A North North N/A R5 KD W5 \( \bar{\sigma} \) 38.0 37.6 N/A N/A 99% 99% 0.00 1.00 North North N/A N/A North North N/A R6 Bedroom W6 \( \bar{\sigma} \) 37.6 37.1 N/A N/A N/A 98% 98% 0.00 1.00 North North N/A N/A North North N/A N/A North North N/A N/A North North N/A N/A North North N/A N/A North North N/A N/A North North N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	Fourth	R1	Bedroom	W1	↸	24.8	24.7	0.0	1.00	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A	
R4       KD       W4       □       29.5       29.3       N/A       N/A       95%       95%       0.00       1.00       North       N/A       N/A       North       North       N/A       N/A       N/A         R5       KD       W5       □       38.0       37.6       N/A       N/A       99%       99%       0.00       1.00       North       North       N/A       North       North       N/A         R6       Bedroom       W6       □       37.6       37.1       N/A       N/A       98%       98%       0.00       1.00       North       North       N/A       North       North       N/A		R2	Bedroom	W2	abla	37.6	37.4	N/A	N/A	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A	
R5 KD W5 \sigma 38.0 37.6 N/A N/A 99% 99% 0.00 1.00 North North N/A N/A North North N/A N/A R6 Bedroom W6 \sigma 37.6 37.1 N/A N/A N/A 98% 98% 0.00 1.00 North North N/A N/A North North N/A		R3	Bedroom	W3	abla	38.0	37.7	N/A	N/A	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A	
R6 Bedroom W6 \sigma 37.6 37.1 N/A N/A 98% 98% 0.00 1.00 North North N/A N/A North North N/A		R4	KD	W4	K	29.5	29.3	N/A	N/A	95%	95%	0.00	1.00	North	North	N/A	N/A	North	North	N/A	
		R5	KD	W5	abla	38.0	37.6	N/A	N/A	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A	
R7 Bedroom W7 \( \times 24.1 \) 24.1 0.0 1.00 99% 99% 0.00 1.00 North North N/A N/A North North N/A		R6	Bedroom	W6	K	37.6	37.1	N/A	N/A	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A	
		R7	Bedroom	W7	abla	24.1	24.1	0.0	1.00	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A	

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Property, room	& window attribut	es		VSC					NSL APSH (room)									
Floor Room Ro	om use		idow	Exis. (%	Prop. (%	Loss (%	Pro./Ex	Exis.	Prop.	Loss	Pro./E	F	Annual (	%APSF	<del>1</del> )	Wint	er (%AF	PSH)
ricor ricom ric	0111 000	Ref./O	rientatio n	VSC)	VSC)	VSC)	. ratio	(% rm)	(% rm)	(m <sup>2</sup> )	x. ratio	Exis.	Prop.	Loss	Pro./Ex	Exis.	Prop.	Pro./Ex
R8	Bedroom	W8	K	37.9	37.2	N/A	N/A	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R9	Bedroom	W9	K	24.1	23.3	8.0	0.97	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R10	Bedroom	W10	↸	36.9	35.3	N/A	N/A	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R11	Bedroom	W11	↸	37.2	35.2	N/A	N/A	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R12	KD	W12	↸	28.7	27.0	N/A	N/A	95%	95%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R13	KD	W13		37.1	34.3	N/A	N/A	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R14	Bedroom	W14	abla	36.6	33.4	N/A	N/A	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R15	Bedroom	W15	↸	23.9	21.7	2.2	0.91	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R16	Bedroom	W16	↸	36.8	32.5	N/A	N/A	98%	92%	0.83	0.94	North	North	N/A	N/A	North	North	N/A
R17	Bedroom	W17	↸	23.0	19.1	3.9	0.83	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R18	Bedroom	W18	abla	35.4	29.6	N/A	N/A	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R19	Bedroom	W19	↸	35.4	29.3	N/A	N/A	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R20	KD	W20	abla	24.6	20.6	3.9	0.84	92%	90%	0.32	0.97	North	North	N/A	N/A	North	North	N/A
R21	Bedroom	W21		36.0	30.3	N/A	N/A	96%	96%	0.03	1.00	North	North	N/A	N/A	North	North	N/A
R22	Bedroom	W22	K	35.6	29.5	N/A	N/A	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
R23	Bedroom	W23		34.8	26.5	8.2	0.76	96%	91%	0.63	0.95	North	North	N/A	N/A	North	North	N/A
R24	Bedroom	W24	K	34.5	25.1	9.4	0.73	98%	79%	2.87	0.81	North	North	N/A	N/A	North	North	N/A
R25	Bedroom	W25	K	34.3	23.5	10.7	0.69	99%	61%	5.36	0.62	North	North	N/A	N/A	North	North	N/A
R26	Bedroom	W26	K	34.1	22.2	11.9	0.65	98%	55%	5.19	0.56	North	North	N/A	N/A	North	North	N/A
R27	Bedroom	W27		33.7	19.8	13.8	0.59	98%	40%	7.81	0.41	North	North	N/A	N/A	North	North	N/A
R28	Bedroom	W28	K	33.3	19.8	13.6	0.59											
	Bedroom	W29		11.4	10.5	0.9	0.92	96%	80%	2.56	0.83	North	North	N/A	N/A	North	North	N/A
R29	KD	W30	K	22.9	15.7	7.2	0.69	87%	34%	6.39	0.39	North	North	N/A	N/A	North	North	N/A
R30	Bedroom	W31		28.9	19.5	9.4	0.68	97%	61%	4.36	0.63	North	North	N/A	N/A	North	North	N/A
R31	LKD	W32		33.4	23.3	10.1	0.70											
	LKD	W33		33.3	23.4	10.0	0.70											
	LKD	W34	$\uparrow$	30.7	27.0	3.7	0.88	100%	99%	0.32	0.99	North	North	N/A	N/A	North	North	N/A
R32	Bedroom	W35	$\uparrow$	6.5	6.4	0.1	0.98	92%	92%	0.04	1.00	North	North	N/A	N/A	North	North	N/A

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Prope	rty, roon	n & window attribut	es		VSC					NS	SL		APSH (room)								
Eleor	Room Ro	nom uso		dow	Exis.	Prop.	Loss	Pro./Ex	Exis.	Prop.	Loss	Pro./E	P	Annual (	%APSH	f)	Wint	er (%AF	PSH)		
FIOOI	KUUIII K	Join use	Ref./O	rientatio n	(% VSC)	(% VSC)	(% VSC)	. ratio	(% rm)	(% rm)	(m <sup>2</sup> )	x. ratio	Exis.	Prop.	Loss	Pro./Ex	Exis.	Prop.	Pro./Ex		
Fifth	R1	Bedroom	W1	K	36.8	33.1	N/A	N/A	96%	96%	0.00	1.00	North	North	N/A	N/A	North	North	N/A		
	R2	Bedroom	W2	K	36.6	32.2	N/A	N/A	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A		
	R3	Bedroom	W3	K	36.0	29.1	N/A	N/A													
		Bedroom	W4	7	18.0	14.3	3.7	0.80	88%	88%	0.08	0.99	North	North	N/A	N/A	North	North	N/A		
	R4	Bedroom	W5	↸	32.2	24.6	7.6	0.76	97%	82%	2.16	0.84	North	North	N/A	N/A	North	North	N/A		
	R5	Bedroom	W6	abla	35.6	26.5	9.1	0.74	98%	80%	2.40	0.82	North	North	N/A	N/A	North	North	N/A		
	R6	Bedroom	W7	K	35.4	24.9	10.4	0.71	98%	68%	3.56	0.70	North	North	N/A	N/A	North	North	N/A		
	R7	Bedroom	W8	abla	34.8	22.0	12.8	0.63													
		Bedroom	W9	7	13.6	11.8	1.7	0.87	95%	61%	4.54	0.64	North	North	N/A	N/A	North	North	N/A		
	R8	Kitchen	W10	abla	22.4	15.0	7.4	0.67	94%	34%	8.81	0.36	North	North	N/A	N/A	North	North	N/A		
	R9	KD	W11	↸	30.9	21.5	9.4	0.69	89%	36%	6.42	0.41	North	North	N/A	N/A	North	North	N/A		
	R10	Bedroom	W12	abla	31.5	22.4	9.2	0.71	97%	64%	4.06	0.66	North	North	N/A	N/A	North	North	N/A		
	R11	LKD	W13	↸	35.4	25.3	10.1	0.72													
		LKD	W14	K	35.3	25.2	10.1	0.71													
		LKD	W15	$\uparrow$	31.7	27.9	N/A	N/A	100%	99%	0.32	0.99	North	North	N/A	N/A	North	North	N/A		
	R12	Bedroom	W16	$\uparrow$	6.3	6.2	0.1	0.98	92%	92%	0.03	1.00	North	North	N/A	N/A	North	North	N/A		
Sixth	R1	Living Room	W1	↸	37.3	31.4	N/A	N/A													
		Living Room	W2	↸	37.5	30.9	N/A	N/A	99%	96%	0.52	0.97	North	North	N/A	N/A	North	North	N/A		
	R2	Bedroom	W3	↸	37.4	29.8	N/A	N/A	99%	89%	1.24	0.90	North	North	N/A	N/A	North	North	N/A		
	R3	LKD	W4	↸	37.0	27.4	N/A	N/A													
		LKD	W5	abla	36.8	27.0	N/A	N/A													
		LKD	W6	$\uparrow$	32.5	28.9	N/A	N/A	100%	99%	0.31	0.99	North	North	N/A	N/A	North	North	N/A		
	R4	Bedroom	W7	$\uparrow$	6.5	6.4	0.1	0.99	92%	92%	0.02	1.00	North	North	N/A	N/A	North	North	N/A		
event	R1	Living Room	W1	Γ	38.3	33.5	N/A	N/A													
		Living Room	W2	↸	38.3	32.8	N/A	N/A	99%	98%	0.16	0.99	North	North	N/A	N/A	North	North	N/A		
	R2	Bedroom	W3	↸	38.1	31.6	N/A	N/A	99%	93%	0.69	0.94	North	North	N/A	N/A	North	North	N/A		
	R3	LKD	W4	↸	37.7	29.2	N/A	N/A													
		LKD	W5	abla	37.6	28.9	N/A	N/A													

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Prope	rty, roon	n & window attribut			V	SC			NS	SL				AP	SH (roc	m)			
Floor	Room Ro	nom uco		dow	Exis.	Prop.	Loss (%	Pro./Ex	Exis.	Prop.	Loss	Pro./E	P	Annual (	%APSF	<i>d)</i>	Winter (%APSH)		
1 1001	NOOHI N	Join use	Ref./O	rientatio n	(% VSC)	(% VSC)	VSC)	. ratio	(% rm)	(% rm)	(m <sup>2</sup> )	x. ratio	Exis.	Prop.	Loss	Pro./Ex	Exis.	Prop. F	Pro./Ex
		LKD	W6	$\uparrow$	33.2	30.0	N/A	N/A	100%	99%	0.15	0.99	North	North	N/A	N/A	North	North	N/A
	R4	Bedroom	W7	$\uparrow$	6.7	6.6	0.1	0.99	92%	92%	0.02	1.00	North	North	N/A	N/A	North	North	N/A
Eighth	R1	Living Room	W1	K	38.5	34.9	N/A	N/A											
		Living Room	W2	abla	38.4	34.3	N/A	N/A	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Bedroom	W3	K	38.3	33.3	N/A	N/A	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R3	LKD	W4	abla	37.9	31.1	N/A	N/A											
		LKD	W5	K	37.8	30.8	N/A	N/A											
		LKD	W6	$\uparrow$	33.8	31.2	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R4	Bedroom	W7	$\uparrow$	6.9	6.9	0.0	1.00	92%	92%	0.01	1.00	North	North	N/A	N/A	North	North	N/A
Ninth	R1	Living Room	W1		38.7	36.2	N/A	N/A											
		Living Room	W2	↸	38.6	35.8	N/A	N/A	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Bedroom	W3		38.5	34.9	N/A	N/A	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R3	LKD	W4	↸	38.2	33.2	N/A	N/A											
		LKD	W5	abla	38.0	33.0	N/A	N/A											
		LKD	W6	$\uparrow$	34.3	32.5	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R4	Bedroom	W7	$\uparrow$	8.7	8.7	0.0	1.00	92%	92%	0.01	1.00	North	North	N/A	N/A	North	North	N/A
	elsize Ro																		
3roun¢	Kitcher	Kitchen	WG_0		36.8	36.8	N/A	N/A											
		Kitchen	WG_02		13.7	13.7	0.0	1.00	82%	82%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
R	Room 1	Kitchen	WG_0		12.3	12.3	0.0	1.00											
		Kitchen	WG_0		5.9	5.9	0.0	1.00	84%	84%	0.00	1.00		North	N/A	N/A	North		N/A
	Room 1	Kitchen	W1_01		17.2	17.2	0.0	1.00	67%	67%	0.00	1.00		North	N/A	N/A	North		N/A
R	Room 2	Kitchen	W1_02	2 7	19.0	18.8	0.2	0.99	52%	52%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
4 5	_																		
	ry Terrac		11/6		0.0 =	0.5 =	2.772	b.// 6	4000	10001	0.00	4.55			A 1 / 2	<b>NI</b> (2	4.4		21/2
3round		Living Room	WG_0		30.7	30.7	N/A	N/A	100%	100%	0.00	1.00	50	50	N/A	N/A	14	14	N/A
First R	Room 1	Living Room	W1_01	$\rightarrow$	33.0	33.0	N/A	N/A	99%	99%	0.00	1.00	54	54	N/A	N/A	16	16	N/A

Scenario: Existing Vs Proposed

Date: 12/04/2022 Scheme: SR\_08/04/2022



Property, room	n & window attrib		VS	SC			N:	SL				AF	PSH (roc	om)			
Floor Room Ro	oom use	Window Ref./Orientatio	Exis. (% VSC)	Prop. (% VSC)	Loss (% VSC)	Pro./Ex . ratio	Exis. (% rm)	Prop. (% rm)	Loss (m²)	Pro./E x. ratio	Exis.	Annual ( Prop.		ᠳ) Pro./Ex		ter <i>(%A</i> Prop.	<i>PSH)</i> Pro./Ex
Room 2	Living Room	W1_02 →	33.0	33.0	N/A	N/A	99%	99%	0.00	1.00	57	57	N/A	N/A	18	18	N/A
Secondedroor	Bedroom	W1_01 →	34.9	34.8	N/A	N/A											
	Bedroom	W1_02 →	34.8	34.7	N/A	N/A	96%	96%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
3 Priory Terrac	e																
Groun@oom 1	Living Room	WG_01 →	31.3	31.3	N/A	N/A	96%	96%	0.00	1.00	52	52	N/A	N/A	16	16	N/A
First ing Ro	Living Room	W1_01 →	33.0	33.0	N/A	N/A											
	Living Room	W1_02 →	33.0	32.9	N/A	N/A	99%	99%	0.00	1.00	55	55	N/A	N/A	17	17	N/A
Secondedroor	Bedroom	W1_01 →	34.7	34.6	N/A	N/A											
	Bedroom	W1_02 →	34.7	34.5	N/A	N/A	97%	97%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
3a Priory Terra	ıce																
Groun@oom 1	Living Room	WG_01 →	31.1	31.0	N/A	N/A	88%	88%	0.02	1.00	51	51	N/A	N/A	17	17	N/A
First ing Ro	Living Room	W1_01 →	32.9	32.9	N/A	N/A											
	Living Room	W1_02 →	32.8	32.7	N/A	N/A	99%	99%	0.00	1.00	54	54	N/A	N/A	17	17	N/A
Secondedroor	Bedroom	W1_01 →	34.6	34.4	N/A	N/A											
	Bedroom	W1_02 →	34.5	34.3	N/A	N/A	97%	97%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R
5 Priory Terrac	e																
Groun@oom 1	Living Room	WG_01 →	30.7	30.7	N/A	N/A	83%	83%	0.00	1.00	51	51	N/A	N/A	16	16	N/A
First ing Ro	Living Room	W1_01 →	32.7	32.6	N/A	N/A											
	Living Room	W1_02 →	32.5	32.4	N/A	N/A	99%	99%	0.00	1.00	54	54	N/A	N/A	16	16	N/A
Secondedroor	Bedroom	W1_01 →	34.4	34.2	N/A	N/A											
	Bedroom	W1_02 →	34.2	34.0	N/A	N/A	97%	97%	0.00	1.00	N/R	N/R	N/R	N/R	N/R	N/R	N/R