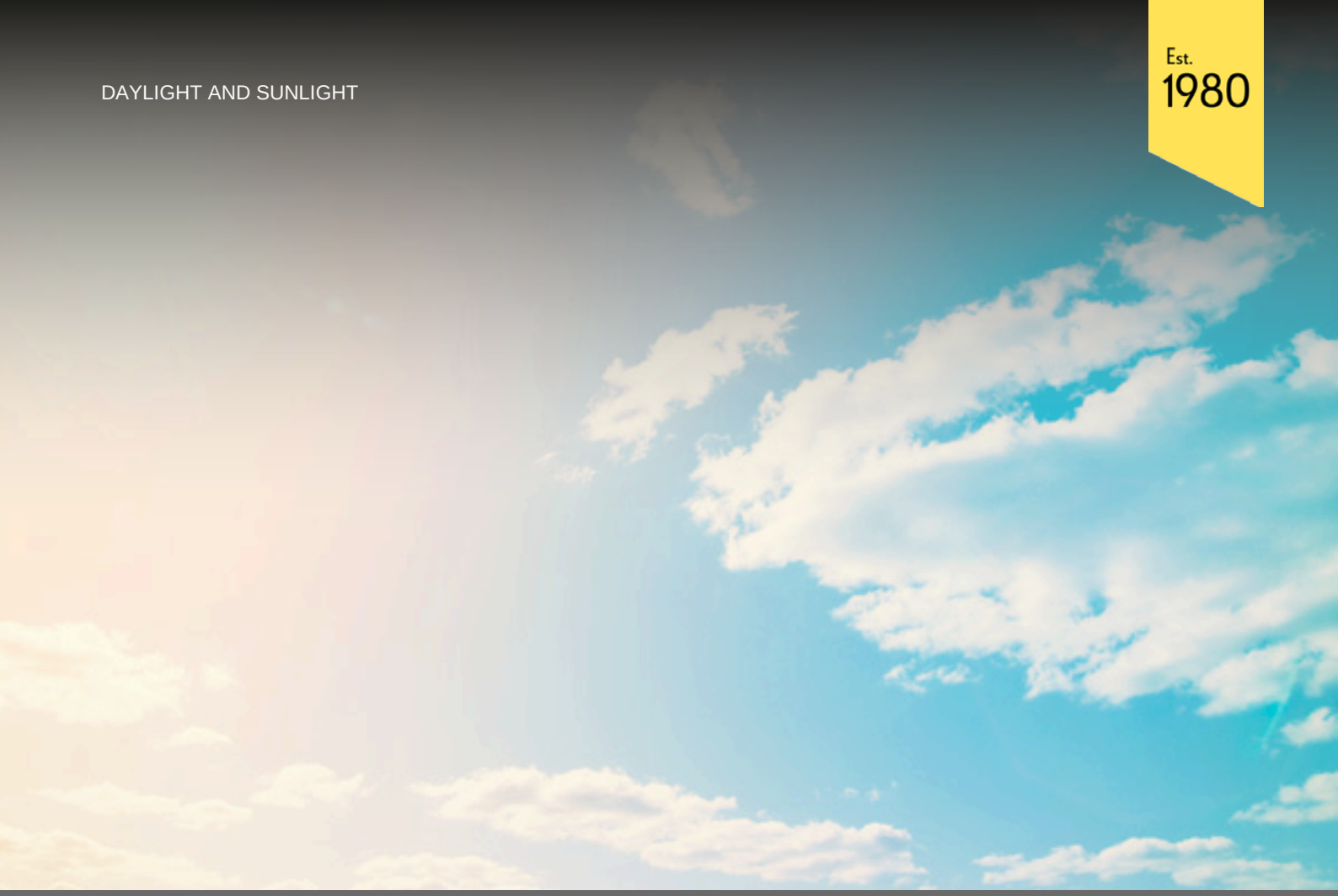
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OSBORNE GROVE NURSING HOME, 16 UPPER TOLLINGTON PARK, LONDON N4 3EL

Daylight and Sunlight Report
Neighbouring Properties

28 February 2023

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Appendix 3 - Daylight and sunlight results for neighbouring buildings

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Appendix 5 - Alternative ‘Mirror-Image’ Massing Baseline Scenario

1. Introduction

1.1. Delva Patman Redler LLP have been engaged by the Applicant to assess the potential effects of the proposed development at 16 Upper Tollington Park ("the Site") on daylight and sunlight to neighbouring properties and amenity spaces. This report has been prepared to accompany the Applicant's planning application.

1.2. The Site is shown central to 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)

1.3. The Site is located within the London Borough of Haringey.

1.4. The proposed development is illustrated in the plan and 3D view drawings in Appendix 2. The development comprises the demolition of the existing buildings and the construction of a part two, three and four storey development around a central courtyard with associated landscaping and roof top plant.

1.5. 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'* (third edition, 2022) ("the BRE guide") and the Professional Guidance Note, *'Daylighting and sunlighting'* (1st edition, 2012), published by the Royal Institution of Chartered Surveyors.

1.6. This report is accompanied by the Appendices listed on the Contents page, including an explanation of the BRE assessment methodology, a glossary of technical terms, drawings, and tabulated results.

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' (2022)

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*' (third edition, 2022). 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 guide should not be seen as an instrument of planning policy. Its aim is to help rather than constrain the designer.*
>
> *Although it gives numerical guidelines, these should be interpreted flexibly 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)

2.7. 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.

2.8. 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'*

2.9. 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'*

2.10. 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…*

2.11. London has limited opportunities for accommodating large-scale development. Suitable areas include the Opportunity Areas and Intensification Areas identified in the London Plan. Development proposals within such areas should support the strategic policy directions for the area, seek to optimise residential and non-residential densities, and contribute towards meeting the minimum guidelines for housing and/or employment capacity.

Local planning policy

Haringey Development Management DPD (adopted July 2017)

2.12. The *Haringey Development Management DPD (2017)* contains the following relevant policy:

> *Policy DM1: Delivering High Quality Design*
>
> *D Development proposals must ensure a high standard of privacy and amenity for the development's users and neighbours. The Council will support proposals that:*
>
> *a Provide appropriate sunlight, daylight and open aspects (including private amenity space where required) to all parts of the development and adjacent buildings and land;*

2.13. The supporting text states:

> *2.9 The Council recognises that amenity can be compromised in a number of ways through development such as detrimental loss of daylight and sunlight to existing and adjacent occupiers; loss of privacy and outlook due to the proximity and design of developments; harmful noise, odour, vibration and air pollution from existing and proposed developments (typically commercial activities and other activities such as rail); developments with the potential to endanger highway safety; and cause detrimental micro-climate effects. Buildings should therefore be compatible with their local environment and conditions.*
>
> *2.10 The design and layout of buildings must enable sufficient sunlight and daylight to penetrate into and between buildings, and ensure that adjoining land or properties are protected from unacceptable overshadowing. The Building Research Establishment (BRE) provides guidance on site layout planning to achieve good sun-lighting and day-lighting (BRE Site Layout Planning for Daylight and Sunlight: a guide to good practice).*

3. Acceptability of daylight/sunlight levels and effects

3.1. The assessment of the effects of development on daylight and sunlight amenity is a two-part process[1]: 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.

v) In urban sites that may be considered low-level density in comparison to the immediate site context or historic context, an alternative baseline utilising a 'mirror image' massing for the existing site can be adopted to illustrate in certain situations that the proposed effects could, in part, be due to the underdeveloped nature of the current baseline site conditions rather than as a result of the proposed over development of the site itself.

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.

[1] 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.

Daylight to neighbouring buildings

4.3. 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.

4.4. The more detailed tests are:

i) 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.

4.5. 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.

4.6. 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.*

4.7. 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.*

4.8. 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.

4.9. For a bay window, the centre window facing directly outwards can be taken as the main window for the VSC calculation. If there would be a significant loss of light to the main window but the room has one or more smaller windows, an overall VSC may be derived by weighting each VSC element in accordance with the proportion of the total glazing area represented by its windows.

Sunlight to neighbouring buildings

4.10. 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.

4.11. 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.

4.12. The amount of sunlight reaching a room is measured by calculating the percentage of annual probable sunlight hours (**APSH**) at the centre its windows.

4.13. 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.

4.14. 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.

4.15. All main living rooms of dwellings, and conservatories, should be checked if they have a window facing within 90˚of due south. Normally loss of sunlight need not be analysed to kitchens and bedrooms, except for bedrooms that also comprise a living space.

4.16. Our assessment has therefore assessed the sunlight to all main reception rooms including living rooms and dining rooms where identified.

Sunlight to neighbouring gardens and amenity spaces

4.17. 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.

4.18. 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.

4.19. If, following development, the area of the garden or other amenity space that can receive two hours of direct sunlight on 21 March is reduced to both less than 50% of its total area and less than 0.8 times its former value, the loss of sunlight is likely to be noticeable and the space will tend to look more heavily overshadowed.

4.20. The assessment normally excludes sunlight at an altitude of 10° or less and ignores fences or walls less than 1.5 metres high, and trees and shrubs. Front gardens, driveways and hard standings for cars need not be assessed.

4.21. Where a large building is proposed which may affect a number of gardens or open spaces, it can be illustrative to plot shadow plans showing the location of shadows at different times of day and year. The equinox (21 March) is the best assessment date as it shows the average level of shadowing. Mid-summer (21 June) is an optional addition date when there would be greater sunlight availability and reduced overshadowing.

5. Categorisation of magnitudes of impact and significance of effects

5.1. In our summary tables, we have counted the number of impacts inside and outside the BRE guidelines and categorised the latter according to their magnitude of impact. The BRE guide does not include a standard scale of impact, so this study adopts the widely used approach in Table 1 below.

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

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

5.3. The sensitivities of the various receptors are set out in Table 2 below.

***Table 2** – Receptor Sensitivity Descriptors*

Sensitivity	Receptors for daylight assessment	Receptors for sunlight assessment
High	Main living rooms and kitchens	Main living rooms, back gardens, and shared or public amenity spaces
Medium	Bedrooms	-
Low	-	Kitchens and bedrooms
Negligible	Circulation spaces, bathrooms and other non-habitable rooms	Circulation spaces, bathrooms and other non-habitable rooms

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. For example, paragraph 5.14 of the Hackney Local Plan acknowledges that the BRE guide's default numerical guidelines were developed with lower density suburban context in mind and that it may be difficult to meet them in denser inner-urban contexts such as in Hackney.

6.3. 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

6.4. 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).

6.5. 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 preSPG 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.*

6.6. 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

6.7. 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.

6.8. 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.'*[2]
>
> *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.*[3]
>
> *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.*

[2] Rainbird, R (on the application of) v The Council of the London Borough of Tower Hamlets [2018]
[3] 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

6.9. 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:

> *2.2.13 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.*
>
> *2.2.14 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.*
>
> *3.2.11 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.*

6.10. 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

6.11. 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.*

"Mirror Image" massing analysis on low-density baseline site context

6.12. Another example where the standard numerical guidelines could be applied flexibly is in relation to the specific context of a given site where it may be considered as being of low-level density massing and underdeveloped in relative relationship and comparison to the immediate site context or specifically in comparison to historic site and its use.

6.13. Appendix F of the BRE guide gives guidance on setting alternative values and suggests that to ensure that new developments matches the height and proportions of existing buildings, the VSC, daylight distribution, and APSH targets for neighbouring windows could be set to those for a 'mirror-image' buildings of the same height and size; an equal distance away on the other side of the boundary.

6.14. It further guides that the 'mirror-image' approach needs to be applied sensibly and flexibly. In such baseline site contexts of low-level density natures, this 'mirror-image' massing approach enabled by the BRE Guide can be considered appropriate to illustrate the point that in certain situations the proposed effects to neighbours would be lessened if the site was actually assessed against a mirror-image masing baseline.

6.15. We have undertaken this additional scenario analysis whereby adopting an appropriate 'mirror-image' massing of the properties to the north and directly adjacent the site of Upper Tollington Park as an alternative baseline for the existing site context. This 'mirror-image' massing also conforms with the historical build-up of the site which, historically, was matching the current terrace forms of the existing residential properties. See historical aerial image of the site below dating from the 1940's.



6.16. This additional scenario intends to demonstrate that some of the effects may be, more so, due to the low-density baseline nature of the existing site conditions, rather than as a direct result of the proposed mass or overdevelopment of the site.

7. Scope of the assessment of neighbouring properties

7.1. 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).

7.2. Consequently, our assessment has been scoped to include nearby residential accommodation, as is common practice for studies for planning applications, and relevant amenity spaces. The properties assessed are set out in Section 9, 'Baseline conditions for neighbouring properties'.

7.3. We identified properties with residential use from a site visit and online research, including the local authority planning records, and estate agency websites.

7.4. 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 could change from the existing baseline.

7.5. We have run a further BRE daylight and sunlight test of a 'mirror-image' baseline and proposed development scenarios. This additional scenario intends to demonstrate that some of the effects especially along the properties to the north of Upper Tollington Park, may be more so due to the underdeveloped nature of the site.

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 model point cloud produced by Terrain Surveys in March 2021

8.2.3. Floor plans for neighbouring buildings, where available

8.2.4. Proposed development: 3D model supplied by Ingleton Wood Architects: (Received 23.02.2023). Model file name: - 812866-IWD-XX-XX-M3-A-1000_Detached.rvt

8.3. Our 3D computer model is illustrated in our spot-height drawings at Appendix 2.

8.4. 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, … 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.*

8.5. Our research yielded the information listed in Table 3 below. The plan ref. refers to the numbering on the location plan at Appendix 2.

***Table 3** - Information on internal layouts of neighbouring properties*

Plan ref.	Neighbouring building / property	Information used
3	9 Upper Tollington Park	Plans from planning ref. HGY/2011/2306
11	25 Upper Tollington Park	Plans from planning ref: HGY/2016/2486
15	33 Upper Tollington Park	Plans from planning ref: HGY/2021/1068
	35 Upper Tollington Park	Plans from planning ref: HGY/2019/1709
22	2 Victoria Terrace	Plans from planning ref: HGY/2005/1611
24	4 Victoria Terrace	Plans from planning ref: HGY/2017/3303
27	28 Perth Road	Plans from planning ref: HGY/2011/0023
28	26 Perth Road	Plans from planning ref: HGY/2017/0374
30	22 Perth Road	Plans from planning ref: HGY/2006/1405
32	18 Perth Road	Plans from planning ref: HGY/2005/0393
33	16 Perth Road	Plans from planning ref: HGY/2014/0197
35	12 Perth Road	Plans from planning ref: HGY/2019/1378

Plan ref.	Neighbouring building / property	Information used
36	10 Perth Road	Plans from planning ref: HGY/2018/3467
39	4 Perth Road	Plan from Estate Agent particulars
40	2 Perth Road	Plans from planning ref: HGY/2008/0977

8.6. 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.

Limitations and assumptions

8.7. 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.

8.8. 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.

8.9. We have used proven and trusted specialist computer software (Waldram Tools for AutoCAD®) to run the calculations recommended in the BRE guide.

8.10. 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. Baseline conditions for neighbouring properties

Daylight and sunlight to neighbouring properties

9.1. We assessed the daylight and sunlight levels to the neighbouring properties in the existing baseline condition shown in our spot-height drawing no. EX1_001 at Appendix 2. The relevant windows are shown on the window maps at Appendix 2.

9.2. The neighbouring buildings/properties that were assessed are listed in Table 4 below. Their daylight and sunlight levels in the existing baseline condition are shown in the results tables at Appendix 3 in the columns headed “Exis.” (being an abbreviation of “Existing”).

9.3. Table 4 below summarises the number of windows and rooms assessed in each neighbouring building/property, and the number meeting the BRE recommended targets in the existing baseline condition. The recommended targets are: 27% VSC; 80% NSL; 25% APSH annually; and 5% APSH in winter.

***Table 4** - Summary of adherence to BRE daylight and sunlight targets in existing baseline condition*

Property address	VSC		NSL		APSH (room)			
	No. of windows tested	No. inside VSC guideline	No. of rooms tested	No. inside NSL guideline	No. of rooms tested	No. inside annual & winter guidelines	No. inside annual guideline	No. inside winter guideline
8 to 14 Charter Court	11	10	11	11	11	11	11	11
7 Upper Tollington Park	9	9	3	3	3	3	3	3
9 Upper Tollington Park	9	9	3	3	3	3	3	3
11 Upper Tollington Park	9	9	3	3	3	3	3	3
13 Upper Tollington Park	9	9	3	3	3	3	3	3
15 Upper Tollington Park	7	7	3	3	3	3	3	3
17 Upper Tollington Park	7	7	3	3	3	3	3	3
19 Upper Tollington Park	7	7	3	3	3	3	3	3
21 Upper Tollington Park	7	7	3	3	3	3	3	3
23 Upper Tollington Park	7	7	3	3	3	3	3	3
25 Upper Tollington Park	7	7	4	4	4	4	4	4
27 Upper Tollington Park	7	6	3	3	3	3	3	3
29 Upper Tollington Park	7	7	3	3	3	3	3	3
31 Upper Tollington Park	7	6	3	3	3	3	3	3
33 Upper Tollington Park	7	6	3	3	3	3	3	3
22 Upper Tollington Park	9	4	7	6	7	7	7	7
24 Upper Tollington Park	4	3	4	4	4	4	4	4
26 Upper Tollington Park	10	6	7	5	7	7	7	7
28 Upper Tollington Park	5	5	4	4	4	4	4	4
30 Upper Tollington Park	6	2	5	4	5	4	4	5
1 Victoria Terrace	4	2	4	4	4	4	4	4
2 Victoria Terrace	5	3	5	5	5	4	5	4
3 Victoria Terrace	5	3	5	5	5	5	5	5
4 Victoria Terrace	6	4	6	6	6	6	6	6
5 Victoria Terrace	4	2	4	4	4	3	3	3
6 Victoria Terrace	3	3	3	3	3	3	3	3
28 Perth Road	4	4	4	4	-	0	0	0
26 Perth Road	5	5	3	3	-	0	0	0
24 Perth Road	4	3	4	4	-	0	0	0
22 Perth Road	5	5	3	3	-	0	0	0
20 Perth Road	4	4	4	4	-	0	0	0
18 Perth Road	4	4	3	3	-	0	0	0
16 Perth Road	4	4	3	3	-	0	0	0
14 Perth Road	5	5	3	3	-	0	0	0
12 Perth Road	6	6	3	3	1	0	0	0
10 Perth Road	7	7	4	4	1	1	1	1
8 Perth Road	9	5	8	8	-	0	0	0

6 Perth Road	7	7	7	7	-	0	0	0
4 Perth Road	8	5	8	8	-	0	0	0
2 Perth Road	15	8	9	9	2	2	2	2
82 Stroud Green Road	4	3	4	4	-	0	0	0
84 Stroud Green Road	3	3	3	3	-	0	0	0
86 Stroud Green Road	4	2	4	3	-	0	0	0
88 Stroud Green Road	3	2	3	3	-	0	0	0
90 Stroud Green Road	3	3	3	3	-	0	0	0
92 Stroud Green Road	5	4	5	4	-	0	0	0
94 Stroud Green Road	4	2	4	3	-	0	0	0
96 Stroud Green Road	3	2	3	3	-	0	0	0
98 Stroud Green Road	3	2	3	3	-	0	0	0
100 Stroud Green Road	7	6	6	6	-	0	0	0
102 Stroud Green Road	3	2	3	3	-	0	0	0
104 Stroud Green Road	6	5	5	4	2	1	2	1
106 Stroud Green Road	4	2	3	2	1	1	1	1
2-4 Upper Tollington Park	2	2	2	2	2	2	2	2
Totals:	**319**	**262**	**225**	**216**	**117**	**112**	**114**	**113**
		82%		96%		96%	97%	97%

9.4. *These baseline results demonstrate generally very good levels of compliance with the assessment criteria over and around the one and two storey buildings and open land on the existing site.*

Sunlight and overshadowing to neighbouring gardens and amenity spaces

9.5. The neighbouring amenity spaces that were assessed are listed in Table 5 below.

9.6. The area of each amenity space that can receive at least two hours of sunlight on 21 March in the existing baseline condition is shown graphically on drawing no. SHD_004 at Appendix 4 and quantified in Table 5 below. The final two columns of the table confirm the proportion of each amenity space that can receive at least two hours of sunlight on 21 March and whether this meets the BRE recommended target of at least 50%.

***Table 5** - Summary of adherence to BRE sun-on-ground target in existing baseline condition*

Name \ level \ ref.	Area (m²)	Existing sunlit >2hrs (m²)	Proportion sunlit >2hrs	Meets BRE?
22 Upper Tollington Park (A1)	92.5	60.1	65%	Yes
24 Upper Tollington Park (A2)	80.7	59.3	74%	Yes
26 Upper Tollington Park (A3)	49.7	25.9	52%	Yes
28 Upper Tollington Park (A4)	53.1	18.8	35%	No
30 Upper Tollington Park (A5)	89.7	69.3	77%	Yes
1 Victoria Terrace (A6)	93.1	76.0	82%	Yes
2 Victoria Terrace (A7)	112.5	92.6	82%	Yes
3 Victoria Terrace (A8)	106.9	88.8	83%	Yes
4 Victoria Terrace (A9)	99.4	78.3	79%	Yes
5 Victoria Terrace (A10)	98.5	81.2	82%	Yes
6 Victoria Terrace (A11)	47.7	32.7	69%	Yes
7 Victoria Terrace (A12)	55.7	31.2	56%	Yes
28 Perth Road (A13)	89.8	62.1	69%	Yes
26 Perth Road (A14)	68.9	50.3	73%	Yes
24 Perth Road (A15)	85.8	54.0	49%	No
22 Perth Road (A16)	58.7	37.2	63%	Yes
20 Perth Road (A17)	94.2	48.7	52%	Yes
18 Perth Road (A18)	77.2	45.6	59%	Yes
16 Perth Road (A19)	71.9	37.5	52%	Yes
14 Perth Road (A20)	64.0	33.6	53%	Yes
12 Perth Road (A21)	64.1	32.1	50%	Yes
10 Perth Road (A22)	66.6	31.6	47%	No
8 Perth Road (A23)	87.4	30.1	34%	No

Name \ level \ ref.	Area (m²)	Existing sunlit >2hrs (m²)	Proportion sunlit >2hrs	Meets BRE?
6 Perth Road (A24)	70.8	21.9	31%	No
4 Perth Road (A25)	75.1	29.3	39%	No
2 Perth Road (A26)	57.6	29.8	52%	Yes
82 Stroud Green Road (A27)	17.4	3.5	20%	No
Total	2,028.9	1,249.3	62%	Yes

9.7. The results of the 2hours sun on ground assessment illustrates that 20 out of the 27 gardens identified for assessment currently achieve the guideline 50% target criteria.

9.8. These results illustrate that there is generally very good access to light to the neighbouring gardens particularly those predominantly south facing gardens along Victoria Terrace. The Perth Road gardens are generally north west facing and so do experience restricted hours of sunlight access which is more a product of their orientation rather than as a result of tall buildings on the existing site.

10. Effects of the proposed development on neighbouring properties

10.1. The proposed development scenario is illustrated on spot-height drawing no. PRO_004 at Appendix 2.

10.2. Daylight and sunlight levels in the proposed development scenario are shown in the results tables at Appendix 3 in the columns headed "Prop." (an abbreviation of "Proposed"). The difference between the existing and proposed levels is shown in the columns headed "Loss". The relative impact is shown in the columns headed "Pro./Ex." (an abbreviation of "Proposed/Existing") and is expressed as a ratio or factor of former value (e.g. 0.80 times former value). Any potential impacts outside the BRE guidelines are identified in red font.

Daylight to neighbouring properties

VSC and NSL

10.3. The results of the VSC and NSL analyses of the neighbouring buildings/properties are tabulated in Appendix 3 and summarised in Table 6 and Table 7 below.

***Table 6** – Summary of VSC impacts to neighbouring windows*

Property address	No. of windows tested	Windows inside **VSC** guidelines		Windows outside **VSC** guidelines					
				Low reduction 0.79-0.70 x FV		Medium reduction 0.69-0.60 x FV		High reduction <0.60 x FV	
		No.	%	No.	%	No.	%	No.	%
8 to 14 Charter Crt	11	11	100%	-	-	-	-	-	-
7 UTP	9	9	100%	-	-	-	-	-	-
9 UTP	9	8	89%	1	11%	-	-	-	-
11 UTP	9	8	89%	1	11%	-	-	-	-
13 UTP	9	7	78%	2	22%	-	-	-	-
15 UTP	7	5	71%	2	29%	-	-	-	-
17 UTP	7	5	71%	2	29%	-	-	-	-
19 UTP	7	5	71%	2	29%	-	-	-	-
21 UTP	7	5	71%	2	29%	-	-	-	-
23 UTP	7	6	86%	1	14%	-	-	-	-
25 UTP	7	6	86%	1	14%	-	-	-	-
27 UTP	7	7	100%	-	-	-	-	-	-
29 UTP	7	7	100%	-	-	-	-	-	-
31 UTP	7	7	100%	-	-	-	-	-	-
33 UTP	7	7	100%	-	-	-	-	-	-
22 UTP	9	4	44%	1	11%	1	11%	3	33%
24 UTP	4	4	100%	-	-	-	-	-	-
26 UTP	10	10	100%	-	-	-	-	-	-
28 UTP	5	5	100%	-	-	-	-	-	-
30 UTP	6	6	100%	-	-	-	-	-	-
1 Victoria Trc	4	4	100%	-	-	-	-	-	-
2 Victoria Trc	5	5	100%	-	-	-	-	-	-
3 Victoria Trc	5	5	100%	-	-	-	-	-	-
4 Victoria Trc	6	6	100%	-	-	-	-	-	-
5 Victoria Trc	4	4	100%	-	-	-	-	-	-
6 Victoria Trc	3	3	100%	-	-	-	-	-	-
28 Perth Rd	4	4	100%	-	-	-	-	-	-
26 Perth Rd	5	5	100%	-	-	-	-	-	-
24 Perth Rd	4	4	100%	-	-	-	-	-	-
22 Perth Rd	5	5	100%	-	-	-	-	-	-
20 Perth Rd	4	4	100%	-	-	-	-	-	-
18 Perth Rd	4	4	100%	-	-	-	-	-	-
16 Perth Rd	4	4	100%	-	-	-	-	-	-
14 Perth Rd	5	5	100%	-	-	-	-	-	-

12 Perth Rd	6	6	100%	-	-	-	-	-	-
10 Perth Rd	7	7	100%	-	-	-	-	-	-
8 Perth Rd	9	9	100%	-	-	-	-	-	-
6 Perth Rd	7	7	100%	-	-	-	-	-	-
4 Perth Rd	8	8	100%	-	-	-	-	-	-
2 Perth Rd	15	15	100%	-	-	-	-	-	-
82 Stroud Gr Rd	4	4	100%	-	-	-	-	-	-
84 Stroud Gr Rd	3	3	100%	-	-	-	-	-	-
86 Stroud Gr Rd	4	4	100%	-	-	-	-	-	-
88 Stroud Gr Rd	3	3	100%	-	-	-	-	-	-
90 Stroud Gr Rd	3	3	100%	-	-	-	-	-	-
92 Stroud Gr Rd	5	5	100%	-	-	-	-	-	-
94 Stroud Gr Rd	4	4	100%	-	-	-	-	-	-
96 Stroud Gr Rd	3	3	100%	-	-	-	-	-	-
98 Stroud Gr Rd	3	3	100%	-	-	-	-	-	-
100 Stroud Gr Rd	7	7	100%	-	-	-	-	-	-
102 Stroud Gr Rd	3	3	100%	-	-	-	-	-	-
104 Stroud Gr Rd	6	6	100%	-	-	-	-	-	-
106 Stroud Gr Rd	4	4	100%	-	-	-	-	-	-
2-4 UTP	2	2	100%	-	-	-	-	-	-
Totals:	**319**	**300**	**94%**	**15**	**5%**	**1**	**0%**	**3**	**1%**

***Table 7** - Summary of NSL impacts to neighbouring rooms*

Property address	No. of rooms tested	Rooms inside **NSL** guidelines		Rooms outside **NSL** guidelines					
				Low reduction 0.79-0.70 x FV		Medium reduction 0.69-0.60 x FV		High reduction <0.60 x FV	
		No.	%	No.	%	No.	%	No.	%
8 to 14 Charter Crt	11	11	100%	-	-	-	-	-	-
7 UTP	3	3	100%	-	-	-	-	-	-
9 UTP	3	3	100%	-	-	-	-	-	-
11 UTP	3	3	100%	-	-	-	-	-	-
13 UTP	3	2	67%	1	33%	-	-	-	-
15 UTP	3	2	67%	-	-	1	33%	-	-
17 UTP	3	2	67%	-	-	1	33%	-	-
19 UTP	3	3	100%	-	-	-	-	-	-
21 UTP	3	2	67%	1	33%	-	-	-	-
23 UTP	3	3	100%	-	-	-	-	-	-
25 UTP	4	4	100%	-	-	-	-	-	-
27 UTP	3	3	100%	-	-	-	-	-	-
29 UTP	3	3	100%	-	-	-	-	-	-
31 UTP	3	3	100%	-	-	-	-	-	-
33 UTP	3	3	100%	-	-	-	-	-	-
22 UTP	7	6	86%	-	-	-	-	1	14%
24 UTP	4	4	100%	-	-	-	-	-	-
26 UTP	7	7	100%	-	-	-	-	-	-
28 UTP	4	4	100%	-	-	-	-	-	-
30 UTP	5	5	100%	-	-	-	-	-	-
1 Victoria Trc	4	4	100%	-	-	-	-	-	-
2 Victoria Trc	5	5	100%	-	-	-	-	-	-
3 Victoria Trc	5	5	100%	-	-	-	-	-	-
4 Victoria Trc	6	6	100%	-	-	-	-	-	-
5 Victoria Trc	4	4	100%	-	-	-	-	-	-
6 Victoria Trc	3	3	100%	-	-	-	-	-	-
28 Perth Rd	4	4	100%	-	-	-	-	-	-
26 Perth Rd	3	3	100%	-	-	-	-	-	-
24 Perth Rd	4	4	100%	-	-	-	-	-	-
22 Perth Rd	3	3	100%	-	-	-	-	-	-

20 Perth Rd	4	4	100%	-	-	-	-	-	-
18 Perth Rd	3	3	100%	-	-	-	-	-	-
16 Perth Rd	3	3	100%	-	-	-	-	-	-
14 Perth Rd	3	2	67%	-	-	-	-	1	33%
12 Perth Rd	3	3	100%	-	-	-	-	-	-
10 Perth Rd	4	3	75%	-	-	-	-	1	25%
8 Perth Rd	8	6	75%	-	-	1	13%	1	13%
6 Perth Rd	7	6	86%	1	14%	-	-	-	-
4 Perth Rd	8	8	100%	-	-	-	-	-	-
2 Perth Rd	9	9	100%	-	-	-	-	-	-
82 Stroud Gr Rd	4	4	100%	-	-	-	-	-	-
84 Stroud Gr Rd	3	3	100%	-	-	-	-	-	-
86 Stroud Gr Rd	4	4	100%	-	-	-	-	-	-
88 Stroud Gr Rd	3	3	100%	-	-	-	-	-	-
90 Stroud Gr Rd	3	3	100%	-	-	-	-	-	-
92 Stroud Gr Rd	5	5	100%	-	-	-	-	-	-
94 Stroud Gr Rd	4	4	100%	-	-	-	-	-	-
96 Stroud Gr Rd	3	3	100%	-	-	-	-	-	-
98 Stroud Gr Rd	3	3	100%	-	-	-	-	-	-
100 Stroud Gr Rd	6	6	100%	-	-	-	-	-	-
102 Stroud Gr Rd	3	3	100%	-	-	-	-	-	-
104 Stroud Gr Rd	5	5	100%	-	-	-	-	-	-
106 Stroud Gr Rd	3	3	100%	-	-	-	-	-	-
2-4 UTP	2	2	100%	-	-	-	-	-	-
Totals:	**225**	**215**	**96%**	**3**	**1%**	**3**	**1%**	**4**	**2%**

10.4. Of the 319 windows and 225 habitable rooms assessed in the 54 neighbouring buildings/properties, 300 (94%) windows would satisfy the VSC guidelines and 216 (96%) rooms would satisfy with the NSL guidelines.

10.5. A total of 5 rooms will fall short of the BRE Guide for both VSC (for individual windows serving those rooms) and NSL assessments.

10.6. 40 of the 54 neighbouring properties considered will fully comply with both of the primary daylight assessment criteria.

10.7. In VSC terms 15 of the 19 infringements will experience minor reductions beyond the BRE guide, 1 will experience medium reductions and the remaining 3 will experience high reductions beyond the BRE guide. Overall, 99% of the neighbouring windows assessed will achieve compliance or minor reductions only. Only 1% of all windows assessed will receive medium or high reductions beyond the BRE guidance criteria.

10.8. In NSL terms 3 of the 9 infringements will experience minor reductions beyond the BRE guide, 3 will experience medium reductions and the remaining 3 will experience high reductions beyond the BRE guide. Overall, 97% of the neighbouring rooms assessed will achieve compliance or minor reductions only. Only 3% of all rooms assessed will receive medium or high reductions beyond the BRE guidance criteria.

Sunlight to neighbouring properties

10.9. The results of the annual and winter sunlight analyses are tabulated in Appendix 3 and summarised in Table 8 below.

***Table 8** - Summary of APSH impacts to neighbouring rooms*

Property address	No. of rooms tested	Rooms inside **annual & winter** guidelines	APSH - annual (rooms)				APSH - winter (rooms)			
			Rooms outside annual guidelines				Rooms outside winter guidelines			
			Low reduction	*Medium reduction*	*High reduction*	Sub-total	*Low reduction*	*Medium reduction*	*High reduction*	Sub-total
8 to 14 Charter Crt	11	11	-	-	-	-	-	-	-	-
7 UTP	3	3	-	-	-	-	-	-	-	-
9 UTP	3	3	-	-	-	-	-	-	-	-
11 UTP	3	3	-	-	-	-	-	-	-	-
13 UTP	3	3	-	-	-	-	-	-	-	-
15 UTP	3	3	-	-	-	-	-	-	-	-
17 UTP	3	3	-	-	-	-	-	-	-	-
19 UTP	3	3	-	-	-	-	-	-	-	-
21 UTP	3	3	-	-	-	-	-	-	-	-
23 UTP	3	3	-	-	-	-	-	-	-	-
25 UTP	4	4	-	-	-	-	-	-	-	-
27 UTP	3	3	-	-	-	-	-	-	-	-
29 UTP	3	3	-	-	-	-	-	-	-	-
31 UTP	3	3	-	-	-	-	-	-	-	-
33 UTP	3	3	-	-	-	-	-	-	-	-
22 UTP	7	5	-	-	2	2	-	-	2	2
24 UTP	4	4	-	-	-	-	-	-	-	-
26 UTP	7	7	-	-	-	-	-	-	-	-
28 UTP	4	4	-	-	-	-	-	-	-	-
30 UTP	5	5	-	-	-	-	-	-	-	-
1 Victoria Trc	4	4	-	-	-	-	-	-	-	-
2 Victoria Trc	5	5	-	-	-	-	-	-	-	-
3 Victoria Trc	5	5	-	-	-	-	-	-	-	-
4 Victoria Trc	6	6	-	-	-	-	-	-	-	-
5 Victoria Trc	4	4	-	-	-	-	-	-	-	-
6 Victoria Trc	3	3	-	-	-	-	-	-	-	-
28 Perth Rd	-	-	-	-	-	-	-	-	-	-
26 Perth Rd	-	-	-	-	-	-	-	-	-	-
24 Perth Rd	-	-	-	-	-	-	-	-	-	-
22 Perth Rd	-	-	-	-	-	-	-	-	-	-
20 Perth Rd	-	-	-	-	-	-	-	-	-	-
18 Perth Rd	-	-	-	-	-	-	-	-	-	-
16 Perth Rd	-	-	-	-	-	-	-	-	-	-
14 Perth Rd	-	-	-	-	-	-	-	-	-	-
12 Perth Rd	1	0	1	-	-	1	-	-	-	-
10 Perth Rd	1	1	-	-	-	-	-	-	-	-
8 Perth Rd	-	-	-	-	-	-	-	-	-	-
6 Perth Rd	-	-	-	-	-	-	-	-	-	-
4 Perth Rd	-	-	-	-	-	-	-	-	-	-
2 Perth Rd	2	2	-	-	-	-	-	-	-	-
82 Stroud Gr Rd	-	-	-	-	-	-	-	-	-	-
84 Stroud Gr Rd	-	-	-	-	-	-	-	-	-	-
86 Stroud Gr Rd	-	-	-	-	-	-	-	-	-	-
88 Stroud Gr Rd	-	-	-	-	-	-	-	-	-	-
90 Stroud Gr Rd	-	-	-	-	-	-	-	-	-	-
92 Stroud Gr Rd	-	-	-	-	-	-	-	-	-	-
94 Stroud Gr Rd	-	-	-	-	-	-	-	-	-	-
96 Stroud Gr Rd	-	-	-	-	-	-	-	-	-	-
98 Stroud Gr Rd	-	-	-	-	-	-	-	-	-	-
100 Stroud Gr Rd	-	-	-	-	-	-	-	-	-	-
102 Stroud Gr Rd	-	-	-	-	-	-	-	-	-	-
104 Stroud Gr Rd	2	2	-	-	-	-	-	-	-	-
106 Stroud Gr Rd	1	1	-	-	-	-	-	-	-	-
2-4 UTP	2	2	-	-	-	-	-	-	-	-
Totals:	**117**	**114**	**1**	**0**	**2**	**3**	**0**	**0**	**2**	**2**
		97%	1%	0%	2%	3%	0%	0%	2%	2%

10.10. Table 8 shows that of the 117 windows assessed in 54 neighbouring properties, 114 (97%) would satisfy the BRE guidelines for both annual and winter APSH.

10.11. Annual sunlight infringements are isolated to only 2 neighbouring properties at 22 Upper Tollington Park and 12 Perth Road. Winter infringements are isolated to a single neighbouring property at 22 Upper Tollington Park.

Sunlight to neighbouring gardens and amenity spaces

10.12. The results of the two-hour sun-on-ground assessment are shown graphically on drawing no. SHD_004 at Appendix 4 and quantified in Table 9 below. The final three columns of the table confirm the proportion of each amenity space that would retain at least two hours of sunlight on 21 March in the proposed condition, the factor of former value, and whether the results meet the BRE numerical guidelines (i.e., at least 50% or at least 0.8 times former value).

***Table 9** - Sun-on-ground impacts to neighbouring amenity spaces*

Property & amenity attributes			Area sunlit to ≥ 2hrs (m^2)		Proportion sunlit ≥ 2hrs (m^2)			
Property	Amenity ref.	Area (sq m)	Existing (sq m)	Proposed (sq m)	Existing %	Proposed %	Pro./Ex. (ratio)	Meets BRE?
22 UTP	A1	92.5	60.1	39.3	65%	42%	0.65	No
24 UTP	A2	80.7	59.3	51.1	74%	63%	0.86	Yes
26 UTP	A3	49.7	25.9	22.9	52%	46%	0.88	Yes
28 UTP	A4	53.1	18.8	17.3	35%	33%	0.92	Yes
30 UTP	A5	89.7	69.3	69.3	77%	77%	1.00	Yes
1 Victoria Trc	A6	93.1	76.0	67.2	82%	72%	0.88	Yes
2 Victoria Trc	A7	112.5	92.6	82.5	82%	73%	0.89	Yes
3 Victoria Trc	A8	106.9	88.8	77.1	83%	72%	0.87	Yes
4 Victoria Trc	A9	99.4	78.3	72.9	79%	73%	0.93	Yes
5 Victoria Trc	A10	98.5	81.2	75.4	82%	77%	0.93	Yes
6 Victoria Trc	A11	47.7	32.7	31.0	69%	65%	0.95	Yes
6 Victoria Trc	A12	55.7	31.2	30.8	56%	55%	0.99	Yes
28 Perth Rd	A13	89.8	62.1	61.8	69%	69%	1.00	Yes
26 Perth Rd	A14	68.9	50.3	50.3	73%	73%	1.00	Yes
24 Perth Rd	A15	85.8	42.0	42.0	49%	49%	1.00	Yes
22 Perth Rd	A16	58.7	37.2	36.9	63%	63%	0.99	Yes
20 Perth Rd	A17	94.2	48.7	48.7	52%	52%	1.00	Yes
18 Perth Rd	A18	77.2	45.6	45.6	59%	59%	1.00	Yes
16 Perth Rd	A19	71.9	37.5	37.3	52%	52%	1.00	Yes
14 Perth Rd	A20	64.0	33.6	33.5	53%	52%	1.00	Yes
12 Perth Rd	A21	64.1	32.1	32.0	50%	50%	1.00	Yes
10 Perth Rd	A22	66.6	31.6	31.6	47%	47%	1.00	Yes
8 Perth Rd	A23	87.4	30.1	30.1	34%	34%	1.00	Yes
6 Perth Rd	A24	70.8	21.9	21.9	31%	31%	1.00	Yes
4 Perth Rd	A25	75.1	29.3	29.3	39%	39%	1.00	Yes
2 Perth Rd	A26	57.6	29.8	29.8	52%	52%	1.00	Yes
82 Stroud Gr Rd	A27	17.4	3.5	3.5	20%	20%	1.00	Yes
	Total	2028.9	1249.3	1171.0	62%	58%	0.94	Yes

10.13. Of the 27 gardens/amenity spaces assessed, all but one would satisfy the BRE guidelines for sun on ground.

10.14. The only garden impacted beyond the guidelines is No. 22 Upper Tollington Park.

10.15.14 of the neighbouring gardens will not experience any reduction when measured against the assessment criteria and overall, the amount of retained light collectively will remain at 58% with an overall reduction ratio also well within the assessment criteria if considered collectively.

11. Alternative 'Mirror-Image' Massing Baseline Scenario - Effects of the proposed development on neighbouring properties

11.1. We have also assessed the daylight and sunlight levels to the neighbouring properties in the alternative 'Mirror Image' massing existing baseline condition shown in our spot-height drawing no. EX1_002 at Appendix 5.

11.2. The proposed development scenario is illustrated on spot-height drawing no. PRO_004 at Appendix 2.

11.3. Daylight and sunlight levels in this alternative baseline development scenario are shown in the results tables at Appendix 5 Any potential impacts which still fall outside the standard BRE guidelines are identified in red font.

Daylight and Sunlight to neighbouring properties

VSC and NSL

11.4. Of the 319 windows and 225 habitable rooms assessed in the 54 neighbouring buildings/properties, 314 (98%) windows would satisfy the VSC guidelines and 216 (96%) rooms would satisfy with the NSL guidelines.

11.5. Notably, all 319 neighbouring windows across the site, except for five windows of the nearest neighbouring property 22 Upper Tollington Park, will satisfy the VSC guidelines.

11.6. 45 of the 54 neighbouring properties considered will fully comply with both of the primary daylight assessment criteria.

11.7. In VSC terms 2 of the 5 infringements will experience minor reductions beyond the BRE guide, and the remaining 3 will experience high reductions beyond the BRE guide and these are all isolated to 22 Upper Tollingotn Park.

11.8. In NSL terms the findings are unchanged in this scenario and 3 of the 9 infringements will experience minor reductions beyond the BRE guide, 3 will experience medium reductions and the remaining 3 will experience high reductions beyond the BRE guide. Overall, 97% of the neighbouring rooms assessed will achieve compliance or minor reductions only. Only 3% of all rooms assessed will receive medium or high reductions beyond the BRE guidance criteria.

11.9. The results of the annual and winter sunlight analyses are tabulated in Appendix 3

11.10. Annual sunlight infringements are also unchanged in this scenario and are isolated to only 2 neighbouring properties at 22 Upper Tollington Park and 12 Perth Road. Winter infringements are isolated to a single neighbouring property at 22 Upper Tollington Park.

11.11. This alternative baseline analysis therefore demonstrates, that the VSC impacts to the properties north of the site and along Upper Tollington Park are due to the nature of the low-level density nature of the existing baseline rather than due to the proposal or overdevelopment of the site.

11.12. It shows that if a 'mirror image' massing form suitable for this site were to be part of the existing baseline, as it was historically, then the VSC effects would be mainly compliant and improves from 94% to 98% compliance and satisfaction of the BRE guidelines.

12. Conclusion

12.1. The Site is in an urban location in the London borough of Haringey, on Upper Tollington Park to the west of Finsbury Park.

12.2. We assessed the potential effects of the proposed development on daylight and sunlight to surrounding residential properties.

12.3. We ran our assessments using methodologies recommended in the BRE guide.

12.4. The advice contained in the BRE guide is not mandatory and its numerical guidelines should be interpreted flexibly.

12.5. The neighbouring daylight analysis demonstrates that 94% of all windows assessed will achieve the VSC criteria and 96% of all rooms assessed will achieve the NSL assessment criteria. Overall, 97% of the neighbouring windows and rooms assessed will achieve compliance or minor reductions only.

12.6. The neighbouring sunlight analysis demonstrates that 97% of all rooms assessed will achieve both the APSH and winter PSH criteria. 97% of all rooms assessed will comply with the primary APSH assessment and 98% will comply or receive a minor reduction beyond the criteria only.

12.7. In shadowing terms 26 of the 27 neighbouring gardens assessed will achieve compliance

12.8. 15 of the neighbouring gardens will not experience any reduction when measured against the assessment criteria and overall, the amount of retained light collectively will remain at 58% with an average reduction well within the assessment criteria.

12.9. The alternative ‘mirror image’ existing baseline scenario demonstrates that all the VSC infringements upon the properties to the north of Upper Tollington Park will fall away in that scenario and that the VSC impacts to the properties north of the site and along Upper Tollington Park are due to the nature of the low-level density nature of the existing baseline rather than due to the proposal or overdevelopment of the site. An improvement of guideline VSC satisfaction to 98% compliance further demonstrates this.

12.10. Overall, the neighbouring daylight and sunlight analyses demonstrates a very high level of compliance with the assessment criteria.

12.11. In conclusion, it is submitted that the layout of the proposed development is generally consistent with the Council’s local planning policy on daylight, sunlight and shadowing.

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'* (2022) and provides a glossary of the terminology used.

Assessment methodology

Daylight and sunlight to neighbouring buildings and amenity spaces

Daylight to neighbouring buildings

2. 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.*

3. 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.

4. 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.*

5. 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.*

6. 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.

7. 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.

Sunlight to neighbouring buildings

8. 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].*

9. 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.*

10. The assessment calculates the percentage of APSH over the whole year (annual sunlight) and between 21 September and 21 March (winter sunlight).

11. 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.

12. 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

13. 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.

14. 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.

15. 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.

16. 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

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

Term	Meaning
Annual probable sunlight hours (**APSH**)	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.
Daylight	Combined skylight and sunlight.
No-sky line (**NSL**)	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.
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



NEIGHBOURING PROPERTIES CONSIDERED FOR ANALYSIS

1: 8 to 14 Charter Court:
Dwg No: 21433-LOC-001

2: 7 Upper Tollington Park:
Dwg No: 21433-LOC-001

3: 9 Upper Tollington Park:
Dwg No: 21433-LOC-001

4: 11 Upper Tollington Park:
Dwg No: 21433-LOC-001

5: 13 Upper Tollington Park:
Dwg No: 21433-LOC-001

6: 15 Upper Tollington Park:
Dwg No: 21433-LOC-001

7: 17 Upper Tollington Park:
Dwg No: 21433-LOC-001

8: 19 Upper Tollington Park:
Dwg No: 21433-LOC-001

9: 21 Upper Tollington Park:
Dwg No: 21433-LOC-001

10: 23 Upper Tollington Park:
Dwg No: 21433-LOC-001

11: 25 Upper Tollington Park:
Dwg No: 21433-LOC-001

12: 27 Upper Tollington Park:
Dwg No: 21433-LOC-001

13: 29 Upper Tollington Park:
Dwg No: 21433-LOC-001

14: 31 Upper Tollington Park:
Dwg No: 21433-LOC-001

15: 33 Upper Tollington Park:
Dwg No: 21433-LOC-001

16: 22 Upper Tollington Park:
Dwg No: 21433-LOC-002

17: 24 Upper Tollington Park:
Dwg No: 21433-LOC-002

18: 26 Upper Tollington Park:
Dwg No: 21433-LOC-002

19: 28 Upper Tollington Park:
Dwg No: 21433-LOC-002

20: 30 Upper Tollington Park:
Dwg No: 21433-LOC-002

21: 1 Victoria Terrace:
Dwg No: 21433-LOC-002

22: 2 Victoria Terrace:
Dwg No: 21433-LOC-002

23: 3 Victoria Terrace:
Dwg No: 21433-LOC-002

24: 4 Victoria Terrace:
Dwg No: 21433-LOC-002

25: 5 Victoria Terrace:
Dwg No: 21433-LOC-002

26: 6 Victoria Terrace:
Dwg No: 21433-LOC-002

27: 28 Perth Road:
Dwg No: 21433-LOC-003

28: 26 Perth Road:
Dwg No: 21433-LOC-003

29: 24 Perth Road:
Dwg No: 21433-LOC-003

30: 22 Perth Road:
Dwg No: 21433-LOC-003

31: 20 Perth Road:
Dwg No: 21433-LOC-003

32: 18 Perth Road:
Dwg No: 21433-LOC-003

33: 16 Perth Road:
Dwg No: 21433-LOC-003

34: 14 Perth Road:
Dwg No: 21433-LOC-003

35: 12 Perth Road:
Dwg No: 21433-LOC-003

36: 10 Perth Road:
Dwg No: 21433-LOC-003

37: 8 Perth Road:
Dwg No: 21433-LOC-003

38: 6 Perth Road:
Dwg No: 21433-LOC-003

39: 4 Perth Road:
Dwg No: 21433-LOC-003

40: 2 Perth Road:
Dwg No: 21433-LOC-003

41: 82 Stroud Green Road:
Dwg No: 21433-LOC-004

42: 84 Stroud Green Road:
Dwg No: 21433-LOC-004

43: 86 Stroud Green Road:
Dwg No: 21433-LOC-004

44: 88 Stroud Green Road:
Dwg No: 21433-LOC-004

45: 90 Stroud Green Road:
Dwg No: 21433-LOC-004

46: 92 Stroud Green Road:
Dwg No: 21433-LOC-004

47: 94 Stroud Green Road:
Dwg No: 21433-LOC-004

48: 96 Stroud Green Road:
Dwg No: 21433-LOC-004

49: 98 Stroud Green Road:
Dwg No: 21433-LOC-004

50: 100 Stroud Green Road:
Dwg No: 21433-LOC-004

51: 102 Stroud Green Road:
Dwg No: 21433-LOC-004

52: 104 Stroud Green Road:
Dwg No: 21433-LOC-004

53: 106 Stroud Green Road:
Dwg No: 21433-LOC-004

54: 2-4 Upper Tollington Park:
Dwg No: 21433-LOC-004

NO DIMENSIONS TO BE SCALED FROM THIS DRAWING

KEY:
- Existing
- Surrounding
- Neighbouring Property

SOURCE DATA:
Existing and Surrounding:

Terrain Surveys:
3D Model File Name: - TS21-099-1-3D.dwg

Wider Context Surrounding:

Accucities 3D Model

NOTES:
Relevant neighbouring properties considered for analysis

REV	Description	Drawn	Date

DELVA PATMAN REDLER
Chartered Surveyors
London 020 7936 3668
Liverpool 0151 242 0980
Bristol 0117 450 9703
www.delvapatmanredler.co.uk
info@delvapatmanredler.co.uk

TITLE:
OSBORNE GROVE NURSING HOME,
16 UPPER TOLLINGTON PARK,
LONDON, N4 3EL.

DRAWING:
LOCATION PLAN
Daylight and Sunlight

DRAWN: VK	JOB NBR: 21433
SCALE: 1:700@A3	
DATE: 22.11.2021	
DWG NO: LOC_DS_001	REV: -



NO DIMENSIONS TO BE SCALED FROM THIS DRAWING

KEY:

- Existing
- Surrounding

SOURCE DATA:

Existing and Surrounding:

Terrain Surveys:
3D Model File Name: - TS21-099-1-3D.dwg

Wider Context Surrounding:

Accucities 3D Model

NOTES:

Heights given in metres AOD.



REV	Description	Drawn	Date

DELVA PATMAN REDLER
Chartered Surveyors

London 020 7936 3668
Liverpool 0151 242 0980
Bristol 0117 450 9703

www.delvapatmanredler.co.uk
info@delvapatmanredler.co.uk

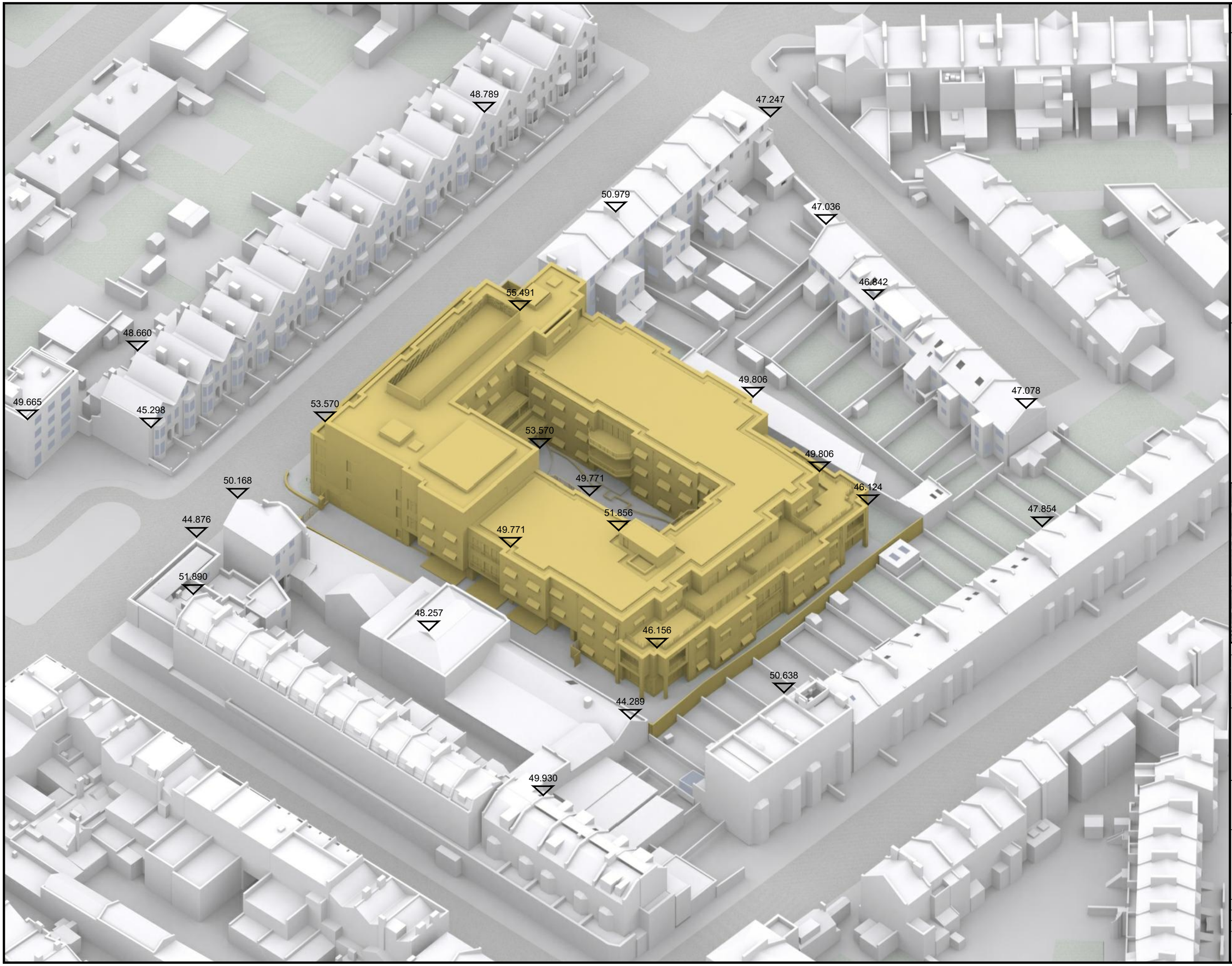
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OSBORNE GROVE NURSING HOME,
16 UPPER TOLLINGTON PARK,
LONDON, N4 3EL.

DRAWING:

EXISTING SCENARIO
Plan and 3D Views

DRAWN: VK	JOB NBR: 21433
SCALE: NTS	
DATE: 08/11/2021	
DWG NO: EXI_001	REV: -



NO DIMENSIONS TO BE SCALED FROM THIS DRAWING

KEY:

- Existing
- Surrounding
- Proposed

SOURCE DATA:

Existing and Surrounding:

Terrain Surveys:
3D Model File Name: - TS21-099-1-3D.dwg

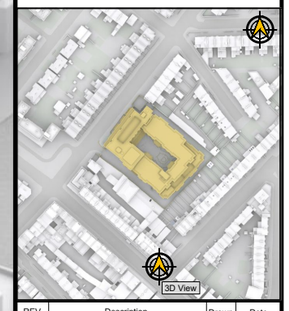
Wider Context Surrounding:

Accucities 3D Model

Proposed:
Ingleton Wood Architects: (Received 23.02.2023)
Model file name:
- 812866-IWD-XX-XX-M3-A-1000_Detached.rvt

NOTES:

Heights given in metres AOD.



REV	Description	Drawn	Date

DELVA PATMAN REDLER
Chartered Surveyors

London 020 7936 3668
Liverpool 0151 242 0980
Bristol 0117 450 9703

www.delvapatmanredler.co.uk
info@delvapatmanredler.co.uk

TITLE:

OSBORNE GROVE NURSING HOME.
16 UPPER TOLLINGTON PARK,
LONDON, N4 3EL.

DRAWING:

PROPOSED SCENARIO
Plan and 3D Views

DRAWN: VK	JOB NBR: 21433
SCALE: NTS	
DATE: 28/02/2023	
DWG NO: PRO_004	REV: -



NO DIMENSIONS TO BE SCALED FROM THIS DRAWING

KEY:

Existing

Surrounding

W1 Windows tested Daylight only

W1 Windows tested Daylight & Sunlight

SOURCE DATA:

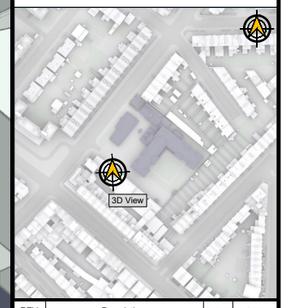
Existing and Surrounding:

Terrain Surveys:
3D Model File Name: - TS21-099-1-3D.dwg

Wider Context Surrounding:

Accucities 3D Model

NOTES:
-



REV	Description	Drawn	Date

DELVA PATMAN REDLER
Chartered Surveyors

London 020 7936 3668
Liverpool 0151 242 0980
Bristol 0117 450 9703

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info@delvapatmanredler.co.uk

TITLE:

OSBORNE GROVE NURSING HOME.
16 UPPER TOLLINGTON PARK,
LONDON, N4 3EL.

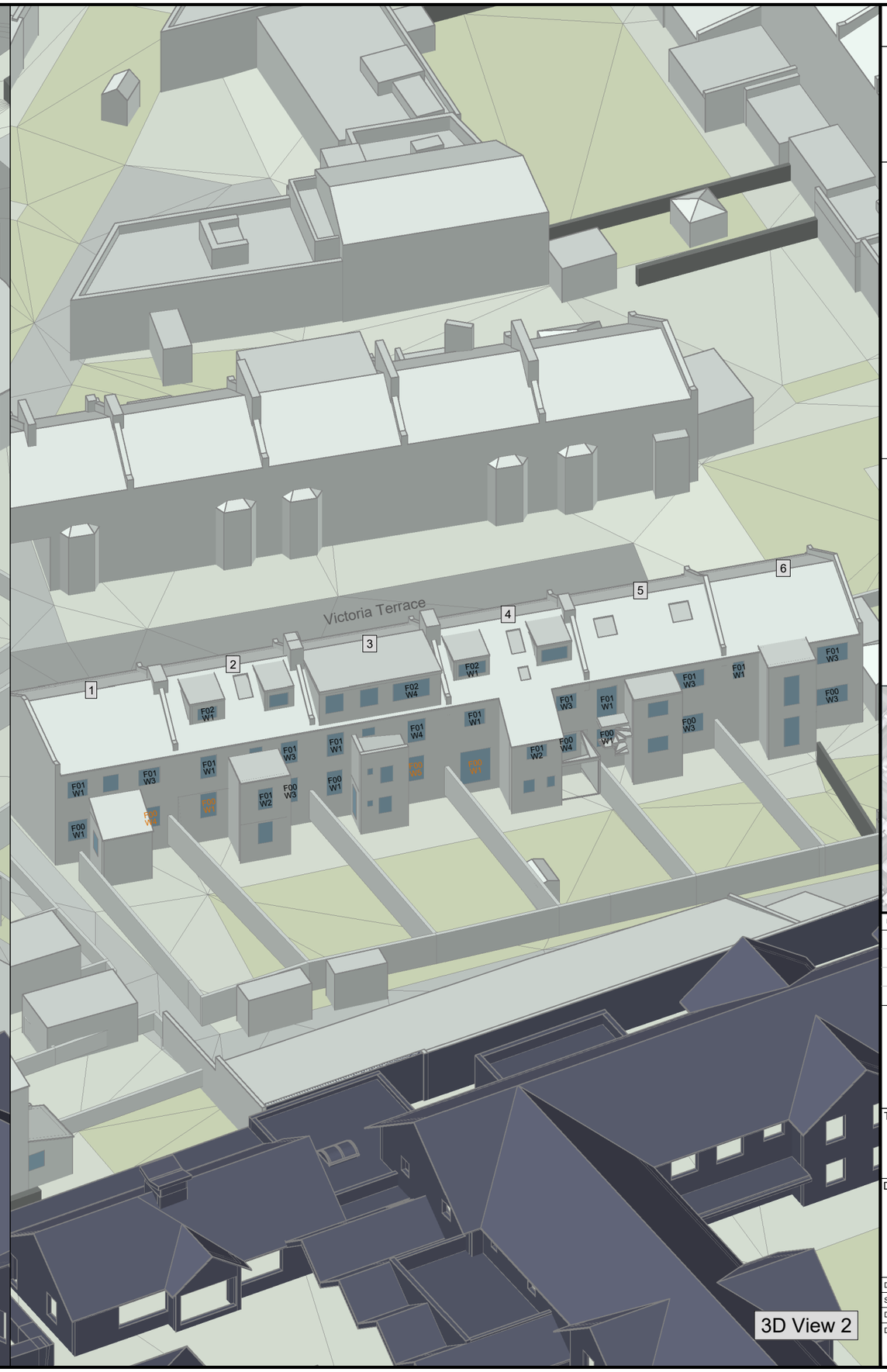
DRAWING:

KEY WINDOW LOCATIONS
Plan and 3D Views

North of Upper Tollington Park (7 - 33)

DRAWN: VK	JOB NBR: 21433
SCALE: NTS	
DATE: 22/11/2021	
DWG NO: LOC_001	REV: -





NO DIMENSIONS TO BE SCALED FROM THIS DRAWING

KEY:

Existing

Surrounding

W1 Windows tested Daylight only

W1 Windows tested Daylight & Sunlight

SOURCE DATA:

Existing and Surrounding:

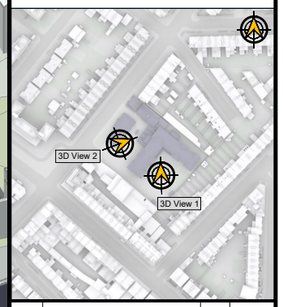
Terrain Surveys:
3D Model File Name: - TS21-099-1-3D.dwg

Wider Context Surrounding:

Accucities 3D Model

NOTES:

-



REV	Description	Drawn	Date

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TITLE:

OSBORNE GROVE NURSING HOME
16 UPPER TOLLINGTON PARK,
LONDON, N4 3EL.

DRAWING:

KEY WINDOW LOCATIONS
Plan and 3D Views

Rear of Upper Tollington Park (22 - 30) &
Rear of Victoria Terrace (1 - 6)

DRAWN: VK	JOB NBR: 21433
SCALE: NTS	
DATE: 22/11/2021	

DWG NO:	REV:
LOC_002	-



NO DIMENSIONS TO BE SCALED FROM THIS DRAWING

KEY:

- Existing
- Surrounding
- W1 Windows tested Daylight only
- W1 Windows tested Daylight & Sunlight

SOURCE DATA:

Existing and Surrounding:

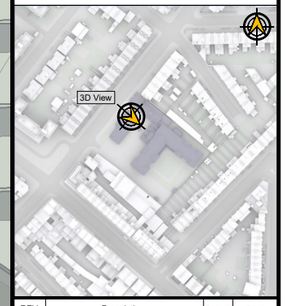
Terrain Surveys:
3D Model File Name: - TS21-099-1-3D.dwg

Wider Context Surrounding:

Accucities 3D Model

NOTES:

-



REV	Description	Drawn	Date

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TITLE:

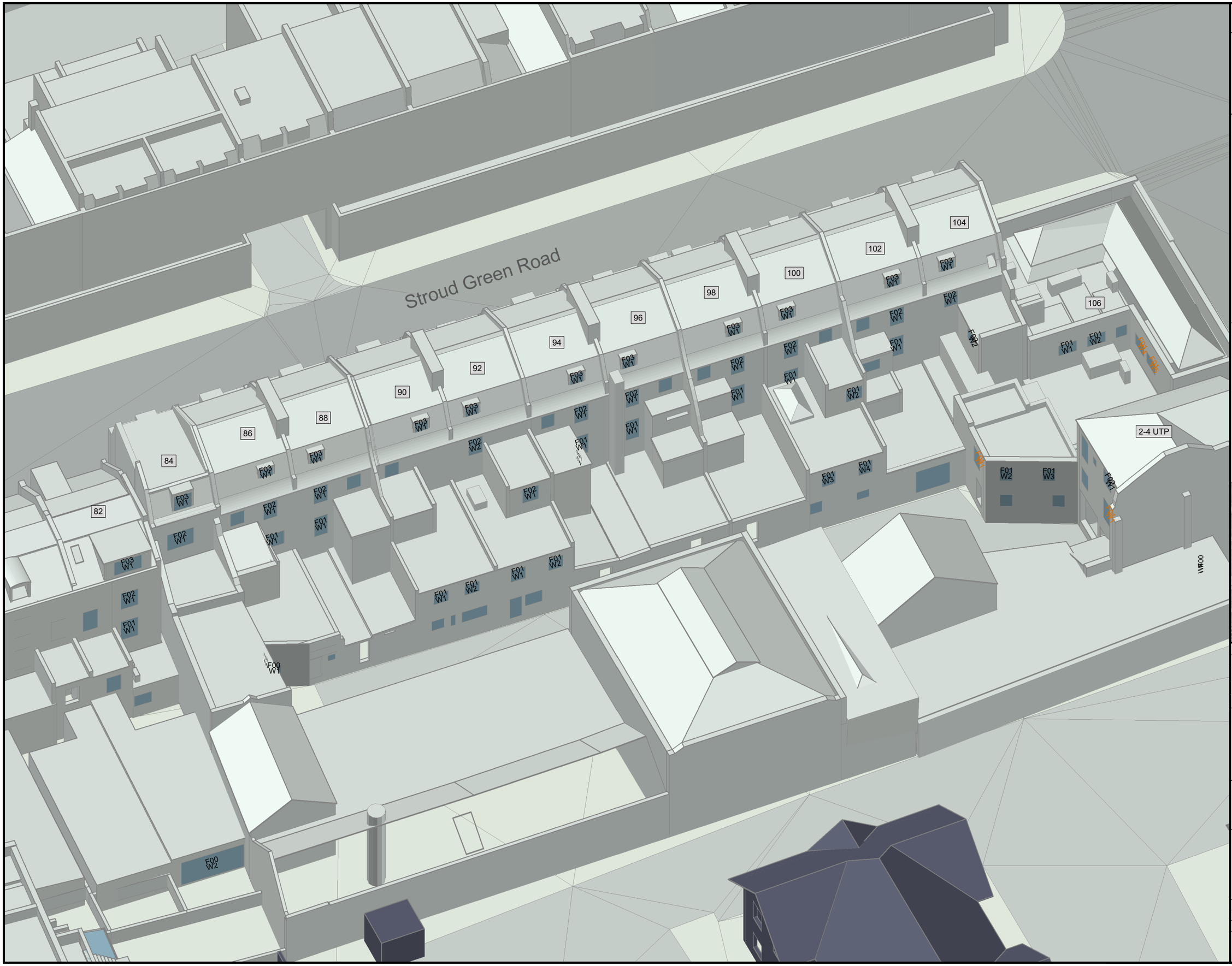
OSBORNE GROVE NURSING HOME
16 UPPER TOLLINGTON PARK,
LONDON, N4 3EL.

DRAWING:

KEY WINDOW LOCATIONS
Plan and 3D Views

Rear of Perth Road (2 - 28)

DRAWN: VK	JOB NBR: 21433
SCALE: NTS	
DATE: 22/11/2021	
DWG NO: LOC_003	REV: -



NO DIMENSIONS TO BE SCALED FROM THIS DRAWING

KEY:

- Existing
- Surrounding
- W1 Windows tested Daylight only
- W1 Windows tested Daylight & Sunlight

SOURCE DATA:

Existing and Surrounding:

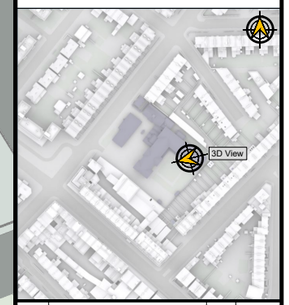
Terrain Surveys:
3D Model File Name: - TS21-099-1-3D.dwg

Wider Context Surrounding:

Accucities 3D Model

NOTES:

-



REV	Description	Drawn	Date

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TITLE:

OSBORNE GROVE NURSING HOME.
16 UPPER TOLLINGTON PARK,
LONDON, N4 3EL.

DRAWING:

KEY WINDOW LOCATIONS
Plan and 3D Views

Rear of Stroud Green Road (82 - 106)

DRAWN: VK	JOB NBR: 21433
SCALE: NTS	
DATE: 22/11/2021	
DWG NO: LOC_004	REV: -

Appendix 3

Daylight and sunlight results for neighbouring buildings

Property, room & window attributes					VSC				Mean VSC (room)				NSL				APSH (room)						
Floor	Room	Room use	Window Ref./Orientation		Exis. (% VSC)	Prop. (% VSC)	Loss (% VSC)	Pro./Ex. ratio	Exis. (% VSC)	Prop. (% VSC)	Loss (% VSC)	Pro./Ex. ratio	Exis. (% rm)	Prop. (% rm)	Loss (m^2)	Pro./Ex. ratio	Annual (%APSH) Exis.	Prop.	Loss	Pro./Ex.	Winter (%APSH) Exis.	Prop.	Pro./Ex.
Note: Red = outside BRE guidelines; Blue = gain in light																							
8 to 14 Charter Crt																							
F00	R1	Living Room	W1	↘	26.2	25.9	0.3	0.99	26.2	25.9	0.3	0.99	97%	97%	0.00	1.00	56	55	N/A	N/A	23	22	N/A
	R2	Bedroom	W2	↘	30.5	29.5	N/A	N/A	30.5	29.5	N/A	N/A	97%	97%	0.00	1.00	62	60	N/A	N/A	22	21	N/A
F01	R1	Living Room	W1	↘	30.1	29.8	N/A	N/A	30.1	29.8	N/A	N/A	97%	97%	0.00	1.00	59	58	N/A	N/A	24	23	N/A
	R2	Bedroom	W2	↘	33.2	32.4	N/A	N/A	33.2	32.4	N/A	N/A	97%	97%	0.00	1.00	63	62	N/A	N/A	23	22	N/A
	R3	Bedroom	W3	↘	34.6	33.5	N/A	N/A	34.6	33.5	N/A	N/A	95%	95%	0.00	1.00	63	63	N/A	N/A	23	23	N/A
F02	R1	Living Room	W1	↘	34.1	33.7	N/A	N/A	34.1	33.7	N/A	N/A	97%	97%	0.00	1.00	64	64	N/A	N/A	24	24	N/A
	R2	Bedroom	W2	↘	35.9	35.2	N/A	N/A	35.9	35.2	N/A	N/A	97%	97%	0.00	1.00	66	66	N/A	N/A	23	23	N/A
	R3	Bedroom	W3	↘	36.7	35.7	N/A	N/A	36.7	35.7	N/A	N/A	95%	95%	0.00	1.00	67	67	N/A	N/A	23	23	N/A
F03	R1	Living Room	W1	↘	37.8	37.1	N/A	N/A	37.8	37.1	N/A	N/A	97%	97%	0.00	1.00	69	69	N/A	N/A	24	24	N/A
	R2	Bedroom	W2	↘	38.3	37.5	N/A	N/A	38.3	37.5	N/A	N/A	97%	97%	0.00	1.00	69	69	N/A	N/A	24	24	N/A
	R3	Bedroom	W3	↘	38.5	37.6	N/A	N/A	38.5	37.6	N/A	N/A	95%	95%	0.00	1.00	69	69	N/A	N/A	24	24	N/A
7 UTP																							
F00	R1	Living Room	W1	↓	31.7	30.7	N/A	N/A															
		Living Room	W2	↘	34.1	29.6	N/A	N/A															
		Living Room	W3	→	29.1	24.0	5.1	0.82	31.6	28.1	N/A	N/A	99%	98%	0.14	0.99	79	71	N/A	N/A	25	23	N/A
F01	R1	Bedroom	W1	↓	33.5	32.7	N/A	N/A															
		Bedroom	W2	↘	36.2	32.5	N/A	N/A															
		Bedroom	W3	→	30.9	26.7	4.2	0.86															
		Bedroom	W4	↘	34.6	30.8	N/A	N/A	33.8	30.7	N/A	N/A	98%	98%	0.00	1.00	82	77	N/A	N/A	27	25	N/A
F02	R1	Bedroom	W1	↘	35.1	32.5	N/A	N/A															
		Bedroom	W2	↘	35.0	32.3	N/A	N/A	35.0	32.4	N/A	N/A	90%	90%	0.00	1.00	62	60	N/A	N/A	21	20	N/A
9 UTP																							
F00	R2	Living Room	W2	↓	27.9	26.1	1.8	0.94															
		Living Room	W3	↘	34.6	29.0	N/A	N/A															
		Living Room	W4	→	28.0	22.2	5.8	0.79	30.2	25.8	4.4	0.85	98%	94%	0.86	0.95	66	55	N/A	N/A	21	18	N/A
F01	R1	Bedroom	W1	↘	34.8	30.8	N/A	N/A															
		Bedroom	W2	↓	30.2	28.8	N/A	N/A															
		Bedroom	W3	↘	36.6	31.9	N/A	N/A															
		Bedroom	W4	→	30.1	25.3	4.8	0.84	32.9	29.2	N/A	N/A	98%	98%	0.00	1.00	70	64	N/A	N/A	24	21	N/A
F02	R1	Bedroom	W1	↘	35.2	32.0	N/A	N/A															
		Bedroom	W2	↘	35.3	32.0	N/A	N/A	35.3	32.0	N/A	N/A	89%	89%	0.02	1.00	61	57	N/A	N/A	21	18	N/A
11 UTP																							
F00	R1	Living Room	W1	↓	27.2	24.7	2.5	0.91															
		Living Room	W2	↘	35.0	28.2	N/A	N/A															
		Living Room	W3	→	29.3	22.9	6.4	0.78	30.5	25.3	5.2	0.83	99%	88%	1.93	0.89	66	56	N/A	N/A	21	18	N/A
F01	R1	Bedroom	W1	↓	29.7	27.6	N/A	N/A															
		Bedroom	W2	↘	36.8	31.2	N/A	N/A															
		Bedroom	W3	→	31.0	25.7	5.3	0.83															
		Bedroom	W4	↘	35.4	29.5	N/A	N/A	33.2	28.5	N/A	N/A	98%	97%	0.23	0.99	70	64	N/A	N/A	24	21	N/A
F02	R1	Bedroom	W1	↘	35.5	31.5	N/A	N/A															
		Bedroom	W2	↘	35.4	31.3	N/A	N/A	35.5	31.4	N/A	N/A	89%	89%	0.02	1.00	62	58	N/A	N/A	21	18	N/A
13 UTP																							
F00	R2	Living Room	W4	↓	28.7	24.4	4.3	0.85															
		Living Room	W5	↘	35.3	26.7	8.6	0.76															
		Living Room	W6	→	30.1	23.4	6.7	0.78	31.4	24.9	6.5	0.79	98%	78%	3.67	0.79	68	57	N/A	N/A	23	18	N/A
F01	R1	Bedroom	W1	↘	35.4	29.1	N/A	N/A															
		Bedroom	W2	↓	30.7	27.2	N/A	N/A															
		Bedroom	W3	↘	37.0	29.9	N/A	N/A															
		Bedroom	W4	→	31.9	26.2	5.7	0.82	33.8	28.1	N/A	N/A	98%	98%	0.00	1.00	70	62	N/A	N/A	24	19	N/A
F02	R1	Bedroom	W1	↘	35.6	30.7	N/A	N/A															
		Bedroom	W2	↘	35.5	30.5	N/A	N/A	35.6	30.6	N/A	N/A	88%	88%	0.01	1.00	61	57	N/A	N/A	21	18	N/A
15 UTP																							
F00	R2	Living Room	W3	↓	28.9	23.3	5.6	0.81															
		Living Room	W4	↘	35.5	26.1	9.4	0.74															
		Living Room	W5	→	29.0	22.6	6.4	0.78	31.1	24.0	7.1	0.77	98%	65%	6.36	0.67	68	57	N/A	N/A	23	16	N/A
F01	R1	Living Room	W1	↘	36.6	29.5	N/A	N/A															
		Living Room	W2	↘	37.1	29.8	N/A	N/A															
		Living Room	W3	↘	37.1	29.8	N/A	N/A	36.9	29.7	N/A	N/A	96%	95%	0.23	0.99	69	61	N/A	N/A	23	17	N/A
F02	R1	Bedroom	W1	↘	38.3	32.8	N/A	N/A	38.3	32.8	N/A	N/A	83%	78%	1.15	0.94	69	65	N/A	N/A	23	20	N/A
17 UTP																							
F00	R1	Living Room	W1	↓	29.1	22.9	6.2	0.79															
		Living Room	W2	↘	35.5	26.0	9.5	0.73															
		Living Room	W3	→	30.0	24.0	6.0	0.80	31.5	24.3	7.2	0.77	98%	65%	6.61	0.66	69	57	N/A	N/A	23	15	N/A
F01	R1	Living Room	W1	↘	37.2	29.7	N/A	N/A															
		Living Room	W2	↘	37.2	29.7	N/A	N/A															
		Living Room	W3	↘	37.2	29.8	N/A	N/A	37.2	29.7	N/A	N/A	97%	95%	0.43	0.98	70	61	N/A	N/A	24	17	N/A

Ratio: N/A or ≥0.8 = inside BRE (N/A* satisfies 4% APSH criterion); N/R = not required

Property, room & window attributes				VSC				Mean VSC (room)				NSL				APSH (room)						
Floor	Room	Room use	Window Ref./Orientation	Exis. (% VSC)	Prop. (% VSC)	Loss (% VSC)	Pro./Ex. ratio	Exis. (% VSC)	Prop. (% VSC)	Loss (% VSC)	Pro./Ex. ratio	Exis. (% rm)	Prop. (% rm)	Loss (m^2)	Pro./Ex. ratio	Annual (%APSH) Exis.	Prop.	Loss	Pro./Ex.	Winter (%APSH) Exis.	Prop.	Pro./Ex.
F02	R1	Bedroom	W1 ↘	38.3	32.7	N/A	N/A	38.3	32.7	N/A	N/A	84%	80%	0.92	0.96	69	64	N/A	N/A	23	19	N/A
19 UTP																						
F00	R2	Bedroom	W3 ↓	30.3	23.4	6.9	0.77															
		Bedroom	W4 ↘	35.3	26.2	9.1	0.74															
		Bedroom	W5 →	28.3	23.5	4.8	0.83	31.3	24.4	6.9	0.78	97%	95%	0.29	0.98	69	58	N/A	N/A	23	15	N/A
F01	R1	Living Room	W1 ↘	37.1	29.8	N/A	N/A															
		Living Room	W2 ↘	37.1	29.9	N/A	N/A															
		Living Room	W3 ↘	37.0	29.9	N/A	N/A	37.1	29.9	N/A	N/A	97%	95%	0.63	0.97	70	61	N/A	N/A	24	16	N/A
F02	R1	Bedroom	W1 ↘	38.3	32.8	N/A	N/A	38.3	32.8	N/A	N/A	83%	79%	1.08	0.95	70	66	N/A	N/A	24	20	N/A
21 UTP																						
F00	R1	Living Room	W1 ↓	29.3	22.4	6.9	0.76															
		Living Room	W2 ↘	35.0	26.5	8.5	0.76															
		Living Room	W3 →	29.2	25.2	4.0	0.86	31.2	24.7	6.5	0.79	98%	75%	4.46	0.77	68	58	N/A	N/A	23	15	N/A
F01	R1	Living Room	W1 ↘	37.0	30.2	N/A	N/A															
		Living Room	W2 ↘	36.9	30.3	N/A	N/A															
		Living Room	W3 ↘	36.8	30.5	N/A	N/A	36.9	30.3	N/A	N/A	96%	96%	0.24	0.99	70	62	N/A	N/A	24	16	N/A
F02	R1	Bedroom	W1 ↘	38.2	33.1	N/A	N/A	38.2	33.1	N/A	N/A	84%	81%	0.83	0.96	70	66	N/A	N/A	24	20	N/A
23 UTP																						
F00	R2	Living Room	W3 ↓	30.5	23.9	6.6	0.78															
		Living Room	W4 ↘	34.6	27.6	N/A	N/A															
		Living Room	W5 →	27.5	24.9	2.6	0.91	30.9	25.4	5.5	0.82	97%	87%	2.01	0.90	70	63	N/A	N/A	24	17	N/A
F01	R1	Living Room	W1 ↘	36.8	30.7	N/A	N/A															
		Living Room	W2 ↘	36.6	31.0	N/A	N/A															
		Living Room	W3 ↘	36.6	31.1	N/A	N/A	36.7	30.9	N/A	N/A	97%	96%	0.21	0.99	70	64	N/A	N/A	24	18	N/A
F02	R1	Bedroom	W1 ↘	38.1	33.7	N/A	N/A	38.1	33.7	N/A	N/A	86%	84%	0.47	0.98	70	66	N/A	N/A	24	20	N/A
25 UTP																						
F00	R1	Living Room	W1 ↓	29.4	23.3	6.1	0.79															
		Living Room	W2 ↘	34.2	28.3	N/A	N/A															
		Living Room	W3 →	28.2	26.4	1.8	0.94	30.6	26.0	4.6	0.85	98%	89%	1.71	0.91	68	60	N/A	N/A	24	16	N/A
F01	R1	Bedroom	W1 ↘	36.4	31.5	N/A	N/A															
		Bedroom	W2 ↘	36.3	31.7	N/A	N/A	36.3	31.6	N/A	N/A	97%	97%	0.00	1.00	70	65	N/A	N/A	24	19	N/A
	R2	Bedroom	W3 ↘	36.1	32.0	N/A	N/A	36.1	32.0	N/A	N/A	95%	95%	0.00	1.00	69	65	N/A	N/A	23	19	N/A
F02	R1	Bedroom	W1 ↘	37.9	34.4	N/A	N/A	37.9	34.4	N/A	N/A	86%	85%	0.26	0.99	70	68	N/A	N/A	24	22	N/A
27 UTP																						
F00	R2	Living Room	W3 ↓	29.9	24.9	5.0	0.83															
		Living Room	W4 Inc	33.2	28.8	N/A	N/A															
		Living Room	W5 Inc	26.4	25.4	1.0	0.96	29.8	26.4	3.4	0.89	97%	96%	0.30	0.98	67	62	N/A	N/A	21	16	N/A
F01	R1	Living Room	W1 ↘	36.0	32.1	N/A	N/A															
		Living Room	W2 ↘	35.7	32.2	N/A	N/A															
		Living Room	W3 ↘	35.6	32.3	N/A	N/A	35.8	32.2	N/A	N/A	97%	97%	0.01	1.00	69	65	N/A	N/A	23	19	N/A
F02	R1	Bedroom	W1 ↘	37.6	34.9	N/A	N/A	37.6	34.9	N/A	N/A	85%	85%	0.02	1.00	70	69	N/A	N/A	24	23	N/A
29 UTP																						
F00	R1	Living Room	W1 Inc	28.4	24.0	4.4	0.85															
		Living Room	W2 Inc	32.4	28.8	N/A	N/A															
		Living Room	W3 Inc	27.0	26.5	0.5	0.98	29.3	26.4	2.9	0.90	98%	97%	0.17	0.99	66	61	N/A	N/A	21	16	N/A
F01	R1	Living Room	W1 ↘	35.3	32.4	N/A	N/A															
		Living Room	W2 ↘	35.2	32.5	N/A	N/A															
		Living Room	W3 ↘	34.9	32.6	N/A	N/A	35.1	32.5	N/A	N/A	97%	97%	0.00	1.00	68	65	N/A	N/A	22	19	N/A
F02	R1	Bedroom	W1 ↘	37.3	35.2	N/A	N/A	37.3	35.2	N/A	N/A	87%	87%	0.03	1.00	68	68	N/A	N/A	22	22	N/A
31 UTP																						
F00	R2	Living Room	W2 ↓	28.5	25.3	3.2	0.89															
		Living Room	W3 ↘	31.4	29.2	N/A	N/A															
		Living Room	W4 →	25.6	25.5	0.1	1.00	28.5	26.7	1.8	0.94	97%	97%	0.02	1.00	65	62	N/A	N/A	20	17	N/A
F01	R1	Living Room	W1 ↘	34.8	32.7	N/A	N/A															
		Living Room	W2 ↘	34.6	32.8	N/A	N/A															
		Living Room	W3 ↘	34.5	32.8	N/A	N/A	34.6	32.8	N/A	N/A	97%	97%	0.02	1.00	68	66	N/A	N/A	22	20	N/A
F02	R1	Bedroom	W1 ↘	37.0	35.6	N/A	N/A	37.0	35.6	N/A	N/A	87%	87%	0.01	1.00	69	69	N/A	N/A	23	23	N/A
33 UTP																						
F00	R1	Bedroom	W1 ↓	27.4	24.8	2.6	0.91															
		Bedroom	W2 ↘	31.1	29.5	N/A	N/A															
		Bedroom	W3 →	26.8	26.8	0.0	1.00	28.4	27.0	N/A	N/A	97%	97%	0.00	1.00	63	61	N/A	N/A	18	16	N/A
F01	R1	LKD	W1 ↘	34.4	33.1	N/A	N/A															
		LKD	W2 ↘	34.4	33.2	N/A	N/A															
		LKD	W3 ↘	34.3	33.3	N/A	N/A	34.4	33.2	N/A	N/A	97%	97%	0.00	1.00	68	67	N/A	N/A	22	21	N/A
F02	R1	LKD	W1 ↘	36.9	35.9	N/A	N/A	36.9	35.9	N/A	N/A	92%	92%	0.00	1.00	69	69	N/A	N/A	23	23	N/A

Ratio: N/A or ≥0.8 = inside BRE (N/A* satisfies 4% APSH criterion); N/R = not required

Property, room & window attributes				VSC				Mean VSC (room)				NSL				APSH (room)						
Floor	Room	Room use	Window Ref./Orientation	Exis. (% VSC)	Prop. (% VSC)	Loss (% VSC)	Pro./Ex. ratio	Exis. (% VSC)	Prop. (% VSC)	Loss (% VSC)	Pro./Ex. ratio	Exis. (% rm)	Prop. (% rm)	Loss (m^2)	Pro./Ex. ratio	Annual (%APSH) Exis.	Prop.	Loss	Pro./Ex.	Winter (%APSH) Exis.	Prop.	Pro./Ex.
22 UTP																						
F00	R1	Bedroom	W1 ↘	19.2	13.0	6.2	0.68	19.2	13.0	6.2	0.68	89%	87%	0.43	0.97	45	21	24	0.47	16	3	0.19
	R2	Kitchen	W2 ↙	20.6	5.9	14.7	0.29	20.6	5.9	14.7	0.29	70%	5%	3.47	0.07	51	20	31	0.39	15	3	0.20
	R3	Living Room	W3 ↙	21.0	6.9	14.1	0.33															
		Living Room	W4 ↙	25.7	9.6	16.1	0.37															
		Living Room	W5 ↘	32.6	28.0	N/A	N/A	26.4	14.8	11.6	0.56	100%	98%	0.26	0.98	82	50	N/A	N/A	19	7	N/A
F01	R1	Bedroom	W1 ↘	22.9	16.7	6.2	0.73	22.9	16.7	6.2	0.73	87%	84%	0.37	0.97	51	29	N/A	N/A	22	7	N/A
	R3	Bedroom	W3 ↘	35.5	31.1	N/A	N/A	35.5	31.1	N/A	N/A	92%	91%	0.04	0.99	70	55	N/A	N/A	24	9	N/A
F02	R1	Bedroom	W1 ↘	37.7	33.2	N/A	N/A	37.7	33.2	N/A	N/A	95%	93%	0.19	0.99	69	54	N/A	N/A	24	13	N/A
	R3	Bedroom	W3 ↘	37.1	33.6	N/A	N/A	37.1	33.6	N/A	N/A	94%	94%	0.00	1.00	69	61	N/A	N/A	24	16	N/A
24 UTP																						
F00	R1	Bedroom	W1 ↘	18.9	16.9	2.0	0.89	18.9	16.9	2.0	0.89	98%	96%	0.18	0.99	38	32	N/A	N/A	14	8	N/A
F01	R1	Bedroom	W1 ↘	35.7	32.6	N/A	N/A	35.7	32.6	N/A	N/A	92%	92%	0.00	1.00	70	61	N/A	N/A	24	15	N/A
F02	R2	Bedroom	W2 ↘	37.7	36.2	N/A	N/A	37.7	36.2	N/A	N/A	95%	95%	0.00	1.00	69	67	N/A	N/A	24	22	N/A
	R3	Bedroom	W3 ↘	37.1	34.8	N/A	N/A	37.1	34.8	N/A	N/A	95%	95%	0.00	1.00	69	64	N/A	N/A	24	19	N/A
26 UTP																						
F00	R1	Bedroom	W1 ↘	18.1	17.3	0.8	0.96	18.1	17.3	0.8	0.96	88%	88%	0.00	1.00	35	33	N/A	N/A	11	9	N/A
	R2	Bedroom	W2 ↙	13.0	11.5	1.5	0.88	13.0	11.5	1.5	0.88	75%	73%	0.23	0.97	36	32	N/A	N/A	14	10	N/A
	R3	Kitchen	W3 ↙	21.4	17.1	4.3	0.80	21.4	17.1	4.3	0.80	69%	62%	0.50	0.90	46	37	N/A	N/A	20	12	N/A
F01	R1	Bedroom	W1 ↘	21.7	21.1	0.6	0.97	21.7	21.1	0.6	0.97	87%	87%	0.00	1.00	46	45	N/A	N/A	18	17	N/A
	R3	Bedroom	W3 ↘	35.7	34.3	N/A	N/A	35.7	34.3	N/A	N/A	100%	100%	0.00	1.00	68	65	N/A	N/A	23	20	N/A
F02	R1	Bedroom	W1 ↘	37.5	36.5	N/A	N/A															
		Bedroom	W2 ↘	37.3	36.4	N/A	N/A	37.4	36.5	N/A	N/A	96%	96%	0.00	1.00	69	68	N/A	N/A	24	23	N/A
	R3	Bedroom	W2 ↘	37.3	36.4	N/A	N/A															
		Bedroom	W3 ↘	37.0	36.3	N/A	N/A															
		Bedroom	W4 ↘	37.5	36.5	N/A	N/A	37.3	36.4	N/A	N/A	100%	100%	0.00	1.00	70	69	N/A	N/A	24	23	N/A
28 UTP																						
F00	R1	Bedroom	W1 ↘	28.9	27.7	N/A	N/A	28.9	27.7	N/A	N/A	96%	96%	0.03	1.00	57	53	N/A	N/A	17	13	N/A
F01	R1	Bedroom	W1 ↘	35.5	34.5	N/A	N/A	35.5	34.5	N/A	N/A	99%	99%	0.00	1.00	67	66	N/A	N/A	22	21	N/A
F02	R2	Bedroom	W2 ↘	37.3	37.2	N/A	N/A	37.3	37.2	N/A	N/A	94%	94%	0.00	1.00	69	68	N/A	N/A	24	23	N/A
	R3	Bedroom	W1 ↘	36.7	36.7	N/A	N/A															
		Bedroom	W3 ↘	37.4	36.6	N/A	N/A	37.0	36.6	N/A	N/A	99%	99%	0.00	1.00	70	69	N/A	N/A	24	23	N/A
30 UTP																						
F00	R1	Bedroom	W1 ↘	23.0	22.8	0.2	0.99	23.0	22.8	0.2	0.99	94%	94%	0.00	1.00	41	41	N/A	N/A	12	12	N/A
	R2	Bedroom	W2 ↙	9.7	9.2	0.5	0.95	9.7	9.2	0.5	0.95	76%	76%	0.00	1.00	20	19	1	0.95	5	4	N/A*
	R3	Kitchen	W3 ↙	21.3	19.5	1.8	0.92															
		Kitchen	W4 ↘	26.0	25.3	0.7	0.97	23.6	22.4	1.2	0.95	99%	98%	0.08	0.99	60	58	N/A	N/A	21	19	N/A
F01	R1	Bedroom	W1 ↘	34.1	33.8	N/A	N/A	34.1	33.8	N/A	N/A	95%	95%	0.00	1.00	63	63	N/A	N/A	19	19	N/A
F02	R1	Bedroom	W1 ↘	37.7	37.3	N/A	N/A	37.7	37.3	N/A	N/A	92%	92%	0.00	1.00	69	68	N/A	N/A	24	23	N/A
1 Victoria Trc																						
F00	R1	Kitchen	W1 ↙	23.1	20.7	2.4	0.90	23.1	20.7	2.4	0.90	96%	96%	0.00	1.00	27	23	4	0.85	5	2	N/A*
	R3	Living Room	W4 ↙	22.3	19.9	2.4	0.89	22.3	19.9	2.4	0.89	88%	87%	0.07	0.99	45	43	N/A	N/A	15	13	N/A
F01	R1	Bedroom	W1 ↙	35.3	32.7	N/A	N/A	35.3	32.7	N/A	N/A	98%	98%	0.00	1.00	62	58	N/A	N/A	24	20	N/A
	R9	Bedroom	W3 ↙	35.7	33.0	N/A	N/A	35.7	33.0	N/A	N/A	95%	95%	0.00	1.00	64	60	N/A	N/A	24	20	N/A
2 Victoria Trc																						
F00	R1	Living Room	W1 ↙	24.9	22.1	2.8	0.89	24.9	22.1	2.8	0.89	90%	90%	0.00	1.00	28	26	2	N/A	4	2	N/A*
	R3	Kitchen	W3 ↙	20.9	18.9	2.0	0.90	20.9	18.9	2.0	0.90	89%	89%	0.00	1.00	43	42	N/A	N/A	14	13	N/A
F01	R1	Bedroom	W1 ↙	34.2	31.9	N/A	N/A	34.2	31.9	N/A	N/A	93%	93%	0.00	1.00	61	58	N/A	N/A	20	17	N/A
	R3	Bedroom	W3 ↙	32.0	30.4	N/A	N/A	32.0	30.4	N/A	N/A	96%	96%	0.00	1.00	58	57	N/A	N/A	22	21	N/A
F02	R1	Bedroom	W1 ↙	37.8	36.0	N/A	N/A	37.8	36.0	N/A	N/A	89%	89%	0.00	1.00	67	65	N/A	N/A	24	22	N/A
3 Victoria Trc																						
F00	R1	Kitchen	W1 ↙	23.6	20.7	2.9	0.88	23.6	20.7	2.9	0.88	95%	95%	0.00	1.00	32	29	3	N/A	7	4	N/A*
	R3	Living Room	W5 ↙	24.3	22.1	2.2	0.91	24.3	22.1	2.2	0.91	86%	86%	0.01	1.00	48	46	N/A	N/A	15	13	N/A
F01	R1	Bedroom	W1 ↙	33.6	31.2	N/A	N/A	33.6	31.2	N/A	N/A	97%	97%	0.00	1.00	57	55	N/A	N/A	16	14	N/A
	R4	Bedroom	W4 ↙	35.0	33.2	N/A	N/A	35.0	33.2	N/A	N/A	93%	93%	0.00	1.00	64	62	N/A	N/A	23	21	N/A
F02	R12	Bedroom	W4 ↙	37.7	35.9	N/A	N/A	37.7	35.9	N/A	N/A	100%	100%	0.00	1.00	66	63	N/A	N/A	24	22	N/A
4 Victoria Trc																						
F00	R1	Dining Room	W1 ↙	24.4	21.9	2.5	0.90	24.4	21.9	2.5	0.90	96%	96%	0.00	1.00	32	29	3	N/A	6	4	N/A*
	R4	Kitchen	W4 ↙	16.9	16.8	0.1	0.99	16.9	16.8	0.1	0.99	95%	95%	0.00	1.00	34	34	N/A	N/A	5	5	N/A
F01	R1	Bedroom	W1 ↙	34.1	31.8	N/A	N/A	34.1	31.8	N/A	N/A	93%	93%	0.00	1.00	56	54	N/A	N/A	15	14	N/A
	R2	Bedroom	W2 ↙	34.0	31.4	N/A	N/A	34.0	31.4	N/A	N/A	91%	91%	0.00	1.00	61	59	N/A	N/A	21	20	N/A
	R3	Bedroom	W3 ↙	30.9	29.6	N/A	N/A	30.9	29.6	N/A	N/A	97%	97%	0.00	1.00	58	56	N/A	N/A	22	20	N/A
F02	R1	Bedroom	W1 ↙	37.0	35.4	N/A	N/A	37.0	35.4	N/A	N/A	81%	80%	0.03	1.00	66	64	N/A	N/A	24	22	N/A
5 Victoria Trc																						
F00	R1	Kitchen	W1 ↙	10.9	10.6	0.3	0.97	10.9	10.6	0.3	0.97	94%	94%	0.00	1.00	17	16	1	0.94	2	1	N/A*

Ratio: N/A or ≥0.8 = inside BRE (N/A* satisfies 4% APSH criterion); N/R = not required

Property, room & window attributes				VSC				Mean VSC (room)				NSL				APSH (room)						
Floor	Room	Room use	Window Ref./Orientation	Exis. (% VSC)	Prop. (% VSC)	Loss (% VSC)	Pro./Ex. ratio	Exis. (% VSC)	Prop. (% VSC)	Loss (% VSC)	Pro./Ex. ratio	Exis. (% rm)	Prop. (% rm)	Loss (m^2)	Pro./Ex. ratio	Annual (%APSH) Exis.	Prop.	Loss	Pro./Ex.	Winter (%APSH) Exis.	Prop.	Pro./Ex.
	R3	Living Room	W3 ↙	22.9	21.8	1.1	0.95	22.9	21.8	1.1	0.95	91%	91%	0.01	1.00	48	47	N/A	N/A	16	15	N/A
F01	R1	Bedroom	W1 ↙	28.8	26.9	1.9	0.93	28.8	26.9	1.9	0.93	98%	98%	0.00	1.00	42	39	N/A	N/A	7	5	N/A
	R3	Bedroom	W3 ↙	30.7	29.7	N/A	N/A	30.7	29.7	N/A	N/A	95%	95%	0.00	1.00	55	55	N/A	N/A	20	20	N/A
6 Victoria Trc																						
F00	R2	Kitchen	W3 ↙	27.1	26.1	1.0	0.96	27.1	26.1	1.0	0.96	97%	97%	0.00	1.00	56	55	N/A	N/A	19	18	N/A
F01	R1	Bedroom	W1 ↙	30.7	29.2	N/A	N/A	30.7	29.2	N/A	N/A	91%	91%	0.00	1.00	46	45	N/A	N/A	8	8	N/A
	R3	Bedroom	W3 ↙	31.7	30.9	N/A	N/A	31.7	30.9	N/A	N/A	98%	98%	0.00	1.00	57	57	N/A	N/A	22	22	N/A
28 Perth Rd																						
F00	R1	Kitchen	W1 ↖	33.8	33.0	N/A	N/A	33.8	33.0	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Kitchen	W2 ↖	33.6	32.6	N/A	N/A	33.6	32.6	N/A	N/A	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F01	R1	Bedroom	W1 ↖	37.1	36.3	N/A	N/A	37.1	36.3	N/A	N/A	94%	94%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F02	R1	Bedroom	W1 ↖	38.3	37.6	N/A	N/A	38.3	37.6	N/A	N/A	94%	94%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
26 Perth Rd																						
F00	R1	Kitchen	W1 ↖	33.8	32.9	N/A	N/A															
		Kitchen	W2 ↖	33.9	32.8	N/A	N/A															
		Kitchen	W3 Inc	69.3	68.8	N/A	N/A	45.7	44.8	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F01	R1	Bedroom	W1 ↖	37.1	36.1	N/A	N/A	37.1	36.1	N/A	N/A	94%	94%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F02	R1	Bedroom	W1 ↖	38.3	37.5	N/A	N/A	38.3	37.5	N/A	N/A	93%	93%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
24 Perth Rd																						
F00	R1	Kitchen	W1 ↖	26.9	26.0	0.9	0.97	26.9	26.0	0.9	0.97	96%	96%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Kitchen	W2 ↖	27.5	27.1	N/A	N/A	27.5	27.1	N/A	N/A	90%	90%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F01	R1	Bedroom	W1 ↖	36.9	35.9	N/A	N/A	36.9	35.9	N/A	N/A	95%	95%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F02	R1	Bedroom	W1 ↖	38.1	37.3	N/A	N/A	38.1	37.3	N/A	N/A	94%	94%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
22 Perth Rd																						
F00	R1	Kitchen	W1 ↖	33.3	31.5	N/A	N/A															
		Kitchen	W2 Inc	66.7	66.0	N/A	N/A															
		Kitchen	W3 Inc	68.1	67.3	N/A	N/A	56.0	54.9	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F01	R1	Bedroom	W1 ↖	36.8	35.4	N/A	N/A	36.8	35.4	N/A	N/A	95%	95%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F02	R1	Bedroom	W1 ↖	38.2	37.1	N/A	N/A	38.2	37.1	N/A	N/A	94%	94%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
20 Perth Rd																						
F00	R1	Kitchen	W1 ↖	28.2	26.2	2.0	0.93	28.2	26.2	2.0	0.93	94%	94%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Kitchen	W2 ↖	27.5	26.2	1.3	0.95	27.5	26.2	1.3	0.95	88%	88%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F01	R1	Bedroom	W1 ↖	36.7	35.1	N/A	N/A	36.7	35.1	N/A	N/A	95%	95%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F02	R1	Bedroom	W1 ↖	38.3	37.0	N/A	N/A	38.3	37.0	N/A	N/A	95%	95%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
18 Perth Rd																						
F00	R1	Kitchen	W1 ↖	33.6	30.0	N/A	N/A															
		Kitchen	W2 ↖	33.6	30.4	N/A	N/A	33.6	30.2	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F01	R1	Bedroom	W1 ↖	36.7	34.5	N/A	N/A	36.7	34.5	N/A	N/A	95%	95%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F02	R1	Bedroom	W1 ↖	38.2	36.7	N/A	N/A	38.2	36.7	N/A	N/A	95%	95%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
16 Perth Rd																						
F00	R1	Kitchen	W1 ↖	32.5	28.4	N/A	N/A															
		Kitchen	W2 ↖	28.9	25.2	3.7	0.87	30.7	26.8	3.9	0.87	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F01	R1	Bedroom	W1 ↖	32.6	31.5	N/A	N/A	32.6	31.5	N/A	N/A	94%	94%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F02	R1	Bedroom	W1 ↖	38.2	36.6	N/A	N/A	38.2	36.6	N/A	N/A	95%	95%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
14 Perth Rd																						
F00	R1	Kitchen	W1 ↖	33.0	27.6	N/A	N/A															
		Kitchen	W2 ↖	33.1	27.6	N/A	N/A															
		Kitchen	W3 ↖	32.0	26.4	5.6	0.83	32.7	27.2	N/A	N/A	100%	59%	9.19	0.59	North	North	N/A	N/A	North	North	N/A
F01	R1	Bedroom	W1 ↖	31.4	29.1	N/A	N/A	31.4	29.1	N/A	N/A	95%	95%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F02	R1	Bedroom	W1 ↖	38.1	36.3	N/A	N/A	38.1	36.3	N/A	N/A	95%	95%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
12 Perth Rd																						
F00	R1	Living Room	W1 ↖	33.7	27.6	N/A	N/A															
		Living Room	W2 ↖	33.7	27.6	N/A	N/A															
		Living Room	W3 ↖	33.8	27.6	N/A	N/A															
		Living Room	W4 Inc	38.5	37.9	N/A	N/A	34.9	30.2	N/A	N/A	100%	100%	0.00	1.00	21	16	5	0.76	1	1	1.00
F01	R1	Bedroom	W1 ↖	30.1	28.2	N/A	N/A	30.1	28.2	N/A	N/A	93%	93%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F02	R1	Bedroom	W1 ↖	37.5	35.7	N/A	N/A	37.5	35.7	N/A	N/A	93%	93%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
10 Perth Rd																						
F00	R1	LKD	W1 ↖	33.8	27.6	N/A	N/A	33.8	27.6	N/A	N/A	87%	39%	22.80	0.45	North	North	N/A	N/A	North	North	N/A
F01	R1	Bedroom	W1 ↖	28.7	26.6	2.1	0.93	28.7	26.6	2.1	0.93	94%	94%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F02	R1	Bedroom	W1 ↖	38.0	36.2	N/A	N/A	38.0	36.2	N/A	N/A	95%	95%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F03	R1	Bedroom	W1 ↖	33.8	32.9	N/A	N/A															
		Bedroom	W2 ↖	36.3	35.4	N/A	N/A															

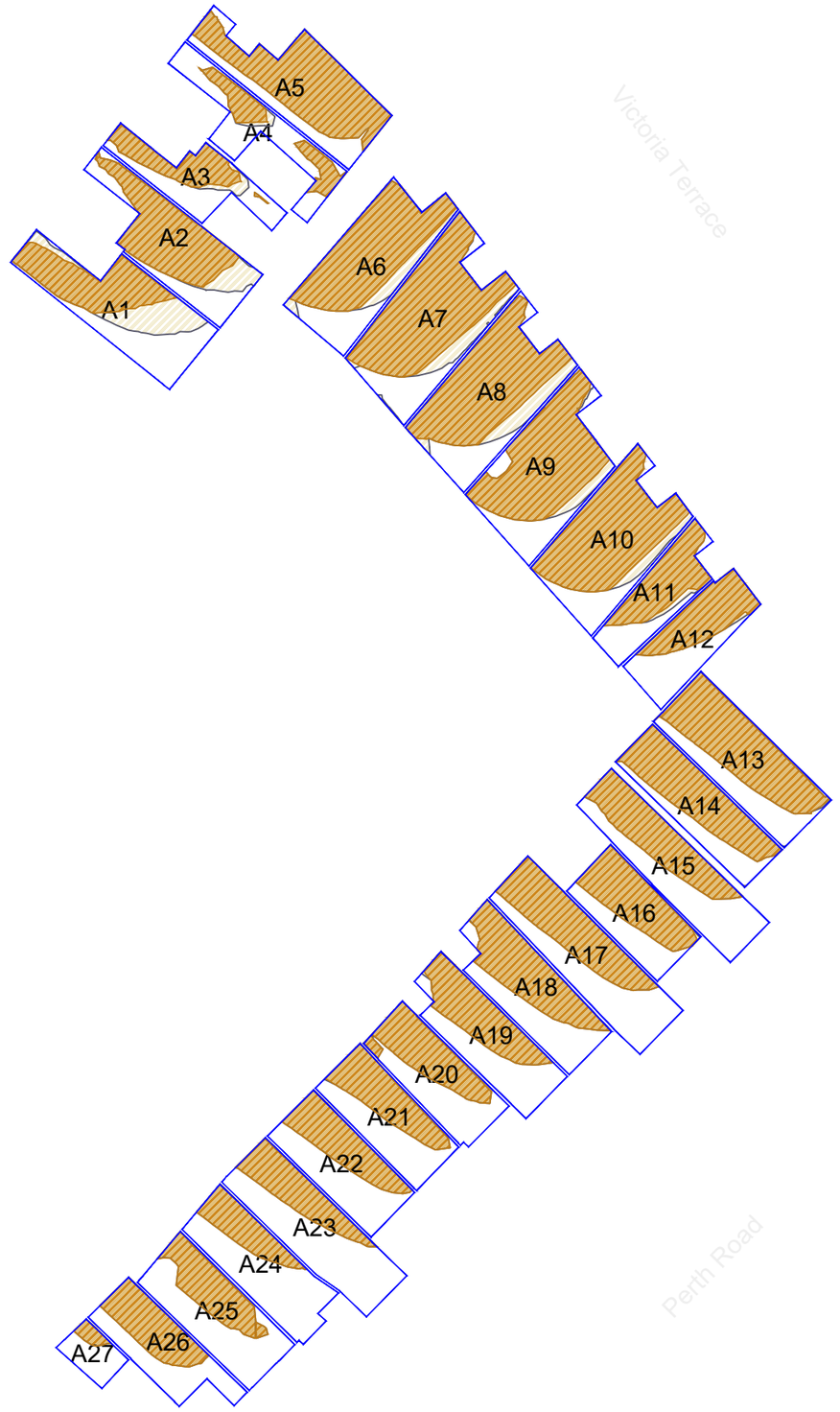
Property, room & window attributes					VSC				Mean VSC (room)				NSL				APSH (room)						
Floor	Room	Room use	Window Ref./Orientation		Exis. (% VSC)	Prop. (% VSC)	Loss (% VSC)	Pro./Ex. ratio	Exis. (% VSC)	Prop. (% VSC)	Loss (% VSC)	Pro./Ex. ratio	Exis. (% rm)	Prop. (% rm)	Loss (m^2)	Pro./Ex. ratio	Annual (%APSH) Exis.	Prop.	Loss	Pro./Ex.	Winter (%APSH) Exis.	Prop.	Pro./Ex.
		Bedroom	W4	Inc	61.2	61.2	N/A	N/A															
		Bedroom	W5	Inc	85.5	85.5	N/A	N/A	54.2	53.8	N/A	N/A	96%	96%	0.00	1.00	77	77	N/A	N/A	17	17	N/A
8 Perth Rd																							
F00	R1	Living Room	W1	↖	24.7	21.7	3.0	0.88															
		Living Room	W2	↖	23.7	21.2	2.5	0.89	24.2	21.5	2.7	0.89	95%	80%	2.07	0.83	North	North	N/A	N/A	North	North	N/A
	R2	Kitchen	W3	↖	19.2	15.7	3.5	0.82	19.2	15.7	3.5	0.82	80%	55%	1.93	0.69	North	North	N/A	N/A	North	North	N/A
F01	R1	Living Room	W1	↖	34.4	31.6	N/A	N/A	34.4	31.6	N/A	N/A	97%	97%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Kitchen	W2	↖	24.0	21.0	3.0	0.88	24.0	21.0	3.0	0.88	96%	96%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F02	R1	Living Room	W1	↖	38.2	36.6	N/A	N/A	38.2	36.6	N/A	N/A	97%	97%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Kitchen	W2	↖	31.3	29.4	N/A	N/A	31.3	29.4	N/A	N/A	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F03	R1	Living Room	W1	↖	39.0	38.1	N/A	N/A	39.0	38.1	N/A	N/A	97%	97%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Kitchen	W2	↖	38.8	37.8	N/A	N/A	38.8	37.8	N/A	N/A	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
6 Perth Rd																							
F00	R1	Kitchen	W2	↖	33.8	29.1	N/A	N/A	33.8	29.1	N/A	N/A	97%	91%	0.37	0.94	North	North	N/A	N/A	North	North	N/A
	R2	Living Room	W1	↖	29.6	25.8	3.8	0.87	29.6	25.8	3.8	0.87	96%	84%	1.97	0.87	North	North	N/A	N/A	North	North	N/A
F01	R1	Living Room	W1	↖	27.9	26.5	1.4	0.95	27.9	26.5	1.4	0.95	97%	97%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Kitchen	W2	↖	37.1	34.7	N/A	N/A	37.1	34.7	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F02	R1	Living Room	W1	↖	37.9	36.5	N/A	N/A	37.9	36.5	N/A	N/A	97%	97%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F03	R1	Living Room	W1	↖	39.1	38.4	N/A	N/A	39.1	38.4	N/A	N/A	97%	97%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Kitchen	W2	↖	38.9	37.9	N/A	N/A	38.9	37.9	N/A	N/A	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
4 Perth Rd																							
F00	R1	Living Room	W1	↖	31.3	28.0	N/A	N/A	31.3	28.0	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Kitchen	W2	↖	19.2	16.7	2.5	0.87	19.2	16.7	2.5	0.87	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F01	R1	Living Room	W1	↖	22.2	20.2	2.0	0.91	22.2	20.2	2.0	0.91	85%	85%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Kitchen	W2	↖	23.1	21.5	1.6	0.93	23.1	21.5	1.6	0.93	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F02	R1	Living Room	W1	↖	28.1	26.8	1.3	0.95	28.1	26.8	1.3	0.95	96%	96%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Kitchen	W2	↖	37.6	36.0	N/A	N/A	37.6	36.0	N/A	N/A	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F03	R1	Living Room	W1	↖	39.1	38.4	N/A	N/A	39.1	38.4	N/A	N/A	97%	97%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Kitchen	W2	↖	38.7	37.9	N/A	N/A	38.7	37.9	N/A	N/A	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
2 Perth Rd																							
F00	R1	Kitchen	W1	↖	19.5	17.4	2.1	0.89	19.5	17.4	2.1	0.89	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Conservatory	W2	↗	14.9	13.1	1.8	0.88															
		Conservatory	W3	↖	30.3	27.8	N/A	N/A															
		Conservatory	W4	↙	26.9	26.9	0.0	1.00															
		Conservatory	W5	Inc	76.3	75.4	N/A	N/A	37.1	35.8	N/A	N/A	100%	100%	0.00	1.00	56	56	N/A	N/A	16	16	N/A
	R3	Living Room	W2	↗	14.9	13.1	1.8	0.88															
		Living Room	W3	↖	30.3	27.8	N/A	N/A															
		Living Room	W4	↙	26.9	26.9	0.0	1.00															
		Living Room	W5	Inc	76.3	75.4	N/A	N/A	37.1	35.8	N/A	N/A	100%	100%	0.00	1.00	56	56	N/A	N/A	16	16	N/A
F01	R1	Living Room	W1	↖	25.1	24.8	0.3	0.99	25.1	24.8	0.3	0.99	97%	97%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Kitchen	W2	↖	32.6	31.1	N/A	N/A	32.6	31.1	N/A	N/A	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F02	R1	Living Room	W1	↖	37.2	36.1	N/A	N/A	37.2	36.1	N/A	N/A	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Kitchen	W2	↖	26.9	26.3	0.6	0.98	26.9	26.3	0.6	0.98	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F03	R1	Living Room	W1	↖	39.0	38.4	N/A	N/A	39.0	38.4	N/A	N/A	96%	96%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Kitchen	W2	↖	38.7	37.8	N/A	N/A	38.7	37.8	N/A	N/A	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
82 Stroud Gr Rd																							
F00	R2	LKD	W2	↗	20.8	20.6	0.2	0.99	20.8	20.6	0.2	0.99	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F01	R1	Bedroom	W1	↗	27.6	27.5	N/A	N/A	27.6	27.5	N/A	N/A	93%	93%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F02	R1	Bedroom	W1	↗	37.3	36.3	N/A	N/A	37.3	36.3	N/A	N/A	94%	94%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F03	R1	Bedroom	W1	↗	38.7	38.2	N/A	N/A	38.7	38.2	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
84 Stroud Gr Rd																							
F01	R1	LK	W1	↖	30.4	29.3	N/A	N/A	30.4	29.3	N/A	N/A	92%	92%	0.10	0.99	North	North	N/A	N/A	North	North	N/A
F02	R1	Kitchen	W1	↗	33.6	32.7	N/A	N/A	33.6	32.7	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F03	R1	Kitchen	W1	↗	38.1	37.5	N/A	N/A	38.1	37.5	N/A	N/A	87%	87%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
86 Stroud Gr Rd																							
F00	R1	Kitchen	W1	↗	13.0	13.0	0.0	1.00	13.0	13.0	0.0	1.00	17%	17%	0.03	0.98	North	North	N/A	N/A	North	North	N/A
F01	R1	Kitchen	W1	↗	24.2	22.8	1.4	0.94	24.2	22.8	1.4	0.94	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F02	R1	Bedroom	W1	↗	37.7	36.6	N/A	N/A	37.7	36.6	N/A	N/A	95%	95%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F03	R1	Bedroom	W1	↗	39.0	38.3	N/A	N/A	39.0	38.3	N/A	N/A	91%	91%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
88 Stroud Gr Rd																							
F01	R1	Living Room	W1	↗	23.2	22.4	0.8	0.97	23.2	22.4	0.8	0.97	86%	86%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F02	R1	Bedroom	W1	↗	37.7	36.5	N/A	N/A	37.7	36.5	N/A	N/A	95%	95%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F03	R1	Bedroom	W1	↗	39.0	38.3	N/A	N/A	39.0	38.3	N/A	N/A	91%	91%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
90 Stroud Gr Rd																							
F01	R1	Kitchen	W1	↗	34.1	31.9	N/A	N/A	34.1	31.9	N/A	N/A	98%	86%	1.25	0.88	North	North	N/A	N/A	North	North	N/A

Property, room & window attributes				VSC				Mean VSC (room)				NSL				APSH (room)						
Floor	Room	Room use	Window Ref./Orientation	Exis. (% VSC)	Prop. (% VSC)	Loss (% VSC)	Pro./Ex. ratio	Exis. (% VSC)	Prop. (% VSC)	Loss (% VSC)	Pro./Ex. ratio	Exis. (% rm)	Prop. (% rm)	Loss (m^2)	Pro./Ex. ratio	Annual (%APSH) Exis.	Prop.	Loss	Pro./Ex.	Winter (%APSH) Exis.	Prop.	Pro./Ex.
	R2	Living Room	W2 ↗	33.1	31.0	N/A	N/A	33.1	31.0	N/A	N/A	98%	88%	1.11	0.89	North	North	N/A	N/A	North	North	N/A
F03	R1	Bedroom	W1 ↗	39.1	38.2	N/A	N/A	39.1	38.2	N/A	N/A	88%	88%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
92 Stroud Gr Rd																						
F01	R1	Living Room	W1 ↗	30.5	28.7	N/A	N/A	30.5	28.7	N/A	N/A	89%	79%	1.08	0.89	North	North	N/A	N/A	North	North	N/A
	R2	Kitchen	W2 ↗	26.5	25.6	0.9	0.97	26.5	25.6	0.9	0.97	68%	61%	0.68	0.90	North	North	N/A	N/A	North	North	N/A
F02	R1	Bedroom	W2 ↗	37.3	36.0	N/A	N/A	37.3	36.0	N/A	N/A	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Bedroom	W1 ↗	36.4	35.0	N/A	N/A	36.4	35.0	N/A	N/A	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F03	R1	Bedroom	W1 ↗	39.1	38.1	N/A	N/A	39.1	38.1	N/A	N/A	88%	88%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
94 Stroud Gr Rd																						
F01	R1	Bedsit	W1 ↗	18.9	18.0	0.9	0.95	18.9	18.0	0.9	0.95	93%	93%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F02	R1	Bedsit	W1 ↗	34.8	33.0	N/A	N/A	34.8	33.0	N/A	N/A	96%	96%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R4	Kitchen	W3 ↖	19.6	19.1	0.5	0.97	19.6	19.1	0.5	0.97	61%	60%	0.03	0.99	North	North	N/A	N/A	North	North	N/A
F03	R1	Bedsit	W1 ↗	37.8	36.7	N/A	N/A	37.8	36.7	N/A	N/A	92%	92%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
96 Stroud Gr Rd																						
F01	R1	Living Room	W1 ↗	20.2	19.2	1.0	0.95	20.2	19.2	1.0	0.95	92%	92%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F02	R1	Bedroom	W1 ↗	31.2	29.2	N/A	N/A	31.2	29.2	N/A	N/A	94%	94%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F03	R1	Bedroom	W1 ↗	36.1	35.0	N/A	N/A	36.1	35.0	N/A	N/A	93%	93%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
98 Stroud Gr Rd																						
F01	R1	Living Room	W1 ↗	26.6	24.5	2.1	0.92	26.6	24.5	2.1	0.92	95%	95%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F02	R1	Bedroom	W1 ↗	37.4	35.2	N/A	N/A	37.4	35.2	N/A	N/A	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F03	R1	Bedroom	W1 ↗	39.0	37.7	N/A	N/A	39.0	37.7	N/A	N/A	91%	91%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
100 Stroud Gr Rd																						
F01	R1	Living Room	W1 ↗	17.2	17.2	0.0	1.00	17.2	17.2	0.0	1.00	86%	86%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Bedroom	W2 ↗	36.0	32.7	N/A	N/A	36.0	32.7	N/A	N/A	97%	97%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R3	Living Room	W3 ↗	27.9	27.2	N/A	N/A	27.9	27.2	N/A	N/A	88%	81%	0.66	0.92	North	North	N/A	N/A	North	North	N/A
	R4	Kitchen	W2 ↗	36.0	32.7	N/A	N/A															
		Kitchen	W4 ↗	28.6	27.1	N/A	N/A	32.3	29.9	N/A	N/A	87%	74%	1.17	0.85	North	North	N/A	N/A	North	North	N/A
F02	R1	Bedroom	W1 ↗	36.9	34.7	N/A	N/A	36.9	34.7	N/A	N/A	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F03	R1	Bedroom	W1 ↗	39.0	37.5	N/A	N/A	39.0	37.5	N/A	N/A	91%	91%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
102 Stroud Gr Rd																						
F01	R1	Living Room	W1 ↗	24.8	22.4	2.4	0.90	24.8	22.4	2.4	0.90	95%	95%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F02	R1	Bedroom	W1 ↗	36.7	34.3	N/A	N/A	36.7	34.3	N/A	N/A	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F03	R1	Bedroom	W1 ↗	38.9	37.4	N/A	N/A	38.9	37.4	N/A	N/A	90%	90%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
104 Stroud Gr Rd																						
F01	R1	Living Room	W1 ↘	28.9	28.3	N/A	N/A															
		Living Room	W2 ↗	30.6	24.7	5.9	0.81	29.8	26.5	3.3	0.89	99%	99%	0.01	1.00	54	53	N/A	N/A	10	10	N/A
	R2	Bedroom	W3 ↗	27.7	22.1	5.6	0.80	27.7	22.1	5.6	0.80	90%	68%	1.91	0.76	North	North	N/A	N/A	North	North	N/A
F02	R1	Bedroom	W1 ↗	36.3	34.3	N/A	N/A	36.3	34.3	N/A	N/A	97%	97%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Kitchen	W2 ↘	24.9	24.4	0.5	0.98	24.9	24.4	0.5	0.98	74%	74%	0.01	1.00	40	39	1	N/A	4	4	N/A*
F03	R1	Bedroom	W1 ↗	38.8	37.4	N/A	N/A	38.8	37.4	N/A	N/A	90%	90%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
106 Stroud Gr Rd																						
F01	R1	Kitchen	W1 ↗	28.1	26.9	1.2	0.96	28.1	26.9	1.2	0.96	83%	83%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Bedroom	W2 ↗	25.4	24.8	0.6	0.98	25.4	24.8	0.6	0.98	59%	59%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R4	Living Room	W4 ↘	25.2	25.1	0.1	1.00															
		Living Room	W5 ↘	27.6	27.5	N/A	N/A	26.4	26.3	0.1	1.00	96%	96%	0.00	1.00	51	51	N/A	N/A	10	10	N/A
2-4 UTP																						
F01	R1	Living Room	W1 ↘	32.5	29.7	N/A	N/A	32.5	29.7	N/A	N/A	94%	94%	0.00	1.00	63	59	N/A	N/A	18	18	N/A
F02	R1	Bedroom	W1 ↘	36.3	34.3	N/A	N/A	36.3	34.3	N/A	N/A	95%	95%	0.00	1.00	67	63	N/A	N/A	23	23	N/A

Ratio: N/A or ≥0.8 = inside BRE (N/A* satisfies 4% APSH criterion); N/R = not required

Appendix 4

Sun-on-ground results for neighbouring amenity spaces



2hr SoG(Ex v Pr)

Property	Floor	Amenity ref.	Area (sq m)	Existing (sq m)	Proposed (sq m)	Existing (%)	Proposed (%)	Pro./Ex. (ratio)	Meets BRE?
22 UTP	F00	A1	92.5	60.1	39.3	65	42	0.65	No
24 UTP	F00	A2	80.7	59.3	51.1	74	63	0.86	Yes
26 UTP	F00	A3	49.7	25.9	22.9	52	46	0.88	Yes
28 UTP	F00	A4	53.1	18.8	17.3	35	33	0.92	Yes
30 UTP	F00	A5	89.7	69.3	69.3	77	77	1.00	Yes
1 Victoria Trc	F00	A6	93.1	76.0	67.2	82	72	0.88	Yes
2 Victoria Trc	F00	A7	112.5	92.6	82.5	82	73	0.89	Yes
3 Victoria Trc	F00	A8	106.9	88.8	77.1	83	72	0.87	Yes
4 Victoria Trc	F00	A9	99.4	78.3	72.9	79	73	0.93	Yes
5 Victoria Trc	F00	A10	98.5	81.2	75.4	82	77	0.93	Yes
6 Victoria Trc	F00	A11	47.7	32.7	31.0	69	65	0.95	Yes
6 Victoria Trc	F00	A12	55.7	31.2	30.8	56	55	0.99	Yes
28 Perth Rd	F00	A13	89.8	62.1	61.8	69	69	1.00	Yes
26 Perth Rd	F00	A14	68.9	50.3	50.3	73	73	1.00	Yes
24 Perth Rd	F00	A15	85.8	42.0	42.0	49	49	1.00	Yes
22 Perth Rd	F00	A16	58.7	37.2	36.9	63	63	0.99	Yes
20 Perth Rd	F00	A17	94.2	48.7	48.7	52	52	1.00	Yes
18 Perth Rd	F00	A18	77.2	45.6	45.6	59	59	1.00	Yes
16 Perth Rd	F00	A19	71.9	37.5	37.3	52	52	1.00	Yes
14 Perth Rd	F00	A20	64.0	33.6	33.5	53	52	1.00	Yes
12 Perth Rd	F00	A21	64.1	32.1	32.0	50	50	1.00	Yes
10 Perth Rd	F00	A22	66.6	31.6	31.6	47	47	1.00	Yes
8 Perth Rd	F00	A23	87.4	30.1	30.1	34	34	1.00	Yes
6 Perth Rd	F00	A24	70.8	21.9	21.9	31	31	1.00	Yes
4 Perth Rd	F00	A25	75.1	29.3	29.3	39	39	1.00	Yes
2 Perth Rd	F00	A26	57.6	29.8	29.8	52	52	1.00	Yes
82 Stroud Gr Rd	F00	A27	17.4	3.5	3.5	20	20	1.00	Yes
		Total	2028.9	1249.3	1171.0	62	58	0.94	Yes

NO DIMENSIONS TO BE SCALED FROM THIS DRAWING

KEY:

- Existing 2-Hr Sunlit Area
- Proposed 2-Hr Sunlit Area
- A02 Amenity Area Number

SOURCE DATA:

Existing and Surrounding:

Terrain Surveys:
3D Model File Name: - TS21-099-1-3D.dwg

Wider Context Surrounding:

Accucities 3D Model

Proposed:
Ingleton Wood Architects: (Received 23.02.2023)
Model file name:
- 812866-IWD-XX-XX-M3-A-1000_Detached.rvt

NOTES:
For it to appear adequately sunlit throughout the year at least half of a garden or amenity area should receive at least two hours of sunlight on 21 March. If as a result of new development an existing garden or amenity area does not meet the above, and the area which can receive two hours of sun on 21 March is less than 0.8 times its former value, then the loss of light is likely to be noticeable

REV	Description	Drawn	Date

DELVA PATMAN REDLER
Chartered Surveyors
London 020 7936 3668
Liverpool 0151 242 0980
Bristol 0117 450 9703
www.delvapatmanredler.co.uk
info@delvapatmanredler.co.uk

TITLE:
OSBORNE GROVE NURSING HOME.
16 UPPER TOLLINGTON PARK,
LONDON, N4 3EL.

DRAWING:
TWO-HOURS SUN-ON-GROUND STUDY
Plan View

DRAWN: VK	JOB NBR: 21433
SCALE: 1:500@A3	
DATE: 24.02.2023	
DWG NO: SHD_004	REV: -

Appendix 5

Alternative ‘Mirror-Image’ Massing Baseline Scenario

Spot-height drawing

Daylight and sunlight results for neighbouring buildings



NO DIMENSIONS TO BE SCALED FROM THIS DRAWING

KEY:

- Existing
- Surrounding

SOURCE DATA:

Existing and Surrounding:

Terrain Surveys:
3D Model File Name: - TS21-099-1-3D.dwg

Wider Context Surrounding:

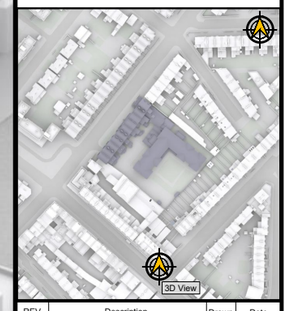
Accucities 3D Model

NOTES:

Heights given in metres AOD.

North of Upper Tollington Park properties mirrored from a central mid-way line across this rows building line and the site.

Adjacent 22 Upper Tollington Park mirrored from a central mid-way line from the boundary line.



REV	Description	Drawn	Date

DELVA PATMAN REDLER
Chartered Surveyors

London 020 7936 3668
Liverpool 0151 242 0980
Bristol 0117 450 9703

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info@delvapatmanredler.co.uk

TITLE:

OSBORNE GROVE NURSING HOME.
16 UPPER TOLLINGTON PARK,
LONDON, N4 3EL.

DRAWING:

EXISTING SCENARIO
Plan and 3D Views

'Mirror Image' Massing as part of Existing Baseline Scenario

DRAWN: VK	JOB NBR: 21433
SCALE: NTS	
DATE: 28/02/2023	
DWG NO: EXI_002	REV: -

Property, room & window attributes					VSC				Mean VSC (room)				NSL				APSH (room)						
Floor	Room	Room use	Window Ref./Orientation		Exis. (% VSC)	Prop. (% VSC)	Loss (% VSC)	Pro./Ex. ratio	Exis. (% VSC)	Prop. (% VSC)	Loss (% VSC)	Pro./Ex. ratio	Exis. (% rm)	Prop. (% rm)	Loss (m^2)	Pro./Ex. ratio	Annual (%APSH) Exis.	Prop.	Loss	Pro./Ex.	Winter (%APSH) Exis.	Prop.	Pro./Ex.
Note: Red = outside BRE guidelines; Blue = gain in light																							
8 to 14 Charter Crt																							
F00	R1	Living Room	W1	↘	25.8	25.9	-0.1	1.00	25.8	25.9	-0.1	1.00	97%	97%	0.00	1.00	55	55	N/A	N/A	22	22	N/A
	R2	Bedroom	W2	↘	29.9	29.5	N/A	N/A	29.9	29.5	N/A	N/A	97%	97%	0.00	1.00	62	60	N/A	N/A	22	21	N/A
F01	R1	Living Room	W1	↘	29.9	29.8	N/A	N/A	29.9	29.8	N/A	N/A	97%	97%	0.00	1.00	59	58	N/A	N/A	24	23	N/A
	R2	Bedroom	W2	↘	32.8	32.4	N/A	N/A	32.8	32.4	N/A	N/A	97%	97%	0.00	1.00	63	62	N/A	N/A	23	22	N/A
	R3	Bedroom	W3	↘	34.1	33.5	N/A	N/A	34.1	33.5	N/A	N/A	95%	95%	0.00	1.00	63	63	N/A	N/A	23	23	N/A
F02	R1	Living Room	W1	↘	34.0	33.7	N/A	N/A	34.0	33.7	N/A	N/A	97%	97%	0.00	1.00	64	64	N/A	N/A	24	24	N/A
	R2	Bedroom	W2	↘	35.7	35.2	N/A	N/A	35.7	35.2	N/A	N/A	97%	97%	0.00	1.00	66	66	N/A	N/A	23	23	N/A
	R3	Bedroom	W3	↘	36.5	35.7	N/A	N/A	36.5	35.7	N/A	N/A	95%	95%	0.00	1.00	67	67	N/A	N/A	23	23	N/A
F03	R1	Living Room	W1	↘	37.7	37.1	N/A	N/A	37.7	37.1	N/A	N/A	97%	97%	0.00	1.00	69	69	N/A	N/A	24	24	N/A
	R2	Bedroom	W2	↘	38.3	37.5	N/A	N/A	38.3	37.5	N/A	N/A	97%	97%	0.00	1.00	69	69	N/A	N/A	24	24	N/A
	R3	Bedroom	W3	↘	38.4	37.6	N/A	N/A	38.4	37.6	N/A	N/A	95%	95%	0.00	1.00	69	69	N/A	N/A	24	24	N/A
7 UTP																							
F00	R1	Living Room	W1	↓	30.7	30.7	N/A	N/A															
		Living Room	W2	↘	31.0	29.6	N/A	N/A															
		Living Room	W3	→	26.1	24.0	2.1	0.92	29.3	28.1	N/A	N/A	99%	98%	0.14	0.99	76	71	N/A	N/A	22	23	1.05
F01	R1	Bedroom	W1	↓	32.9	32.7	N/A	N/A															
		Bedroom	W2	↘	34.5	32.5	N/A	N/A															
		Bedroom	W3	→	29.2	26.7	2.5	0.91															
		Bedroom	W4	↘	32.9	30.8	N/A	N/A	32.4	30.7	N/A	N/A	98%	98%	0.00	1.00	82	77	N/A	N/A	27	25	N/A
F02	R1	Bedroom	W1	↘	34.6	32.5	N/A	N/A															
		Bedroom	W2	↘	34.4	32.3	N/A	N/A	34.5	32.4	N/A	N/A	90%	90%	0.00	1.00	62	60	N/A	N/A	21	20	N/A
9 UTP																							
F00	R2	Living Room	W2	↓	26.2	26.1	0.1	1.00															
		Living Room	W3	↘	30.9	29.0	N/A	N/A															
		Living Room	W4	→	24.8	22.2	2.6	0.90	27.3	25.8	1.5	0.95	98%	94%	0.86	0.95	64	55	N/A	N/A	19	18	N/A
F01	R1	Bedroom	W1	↘	33.0	30.8	N/A	N/A															
		Bedroom	W2	↓	29.3	28.8	N/A	N/A															
		Bedroom	W3	↘	34.5	31.9	N/A	N/A															
		Bedroom	W4	→	28.3	25.3	3.0	0.89	31.3	29.2	N/A	N/A	98%	98%	0.00	1.00	70	64	N/A	N/A	24	21	N/A
F02	R1	Bedroom	W1	↘	34.7	32.0	N/A	N/A															
		Bedroom	W2	↘	34.7	32.0	N/A	N/A	34.7	32.0	N/A	N/A	89%	89%	0.01	1.00	61	57	N/A	N/A	21	18	N/A
11 UTP																							
F00	R1	Living Room	W1	↓	25.1	24.7	0.4	0.98															
		Living Room	W2	↘	30.9	28.2	N/A	N/A															
		Living Room	W3	→	26.1	22.9	3.2	0.88	27.4	25.3	2.1	0.92	99%	88%	1.93	0.89	64	56	N/A	N/A	19	18	N/A
F01	R1	Bedroom	W1	↓	28.5	27.6	N/A	N/A															
		Bedroom	W2	↘	34.5	31.2	N/A	N/A															
		Bedroom	W3	→	29.1	25.7	3.4	0.88															
		Bedroom	W4	↘	33.2	29.5	N/A	N/A	31.3	28.5	N/A	N/A	98%	97%	0.23	0.99	70	64	N/A	N/A	24	21	N/A
F02	R1	Bedroom	W1	↘	34.9	31.5	N/A	N/A															
		Bedroom	W2	↘	34.7	31.3	N/A	N/A	34.8	31.4	N/A	N/A	89%	89%	0.02	1.00	62	58	N/A	N/A	21	18	N/A
13 UTP																							
F00	R2	Living Room	W4	↓	26.2	24.4	1.8	0.93															
		Living Room	W5	↘	30.9	26.7	4.2	0.86															
		Living Room	W6	→	26.9	23.4	3.5	0.87	28.0	24.9	3.1	0.89	98%	78%	3.67	0.79	65	57	N/A	N/A	20	18	N/A
F01	R1	Bedroom	W1	↘	33.1	29.1	N/A	N/A															
		Bedroom	W2	↓	29.3	27.2	N/A	N/A															
		Bedroom	W3	↘	34.5	29.9	N/A	N/A															
		Bedroom	W4	→	30.0	26.2	3.8	0.87	31.7	28.1	N/A	N/A	98%	98%	0.00	1.00	70	62	N/A	N/A	24	19	N/A
F02	R1	Bedroom	W1	↘	34.9	30.7	N/A	N/A															
		Bedroom	W2	↘	34.8	30.5	N/A	N/A	34.8	30.6	N/A	N/A	88%	88%	0.01	1.00	61	57	N/A	N/A	21	18	N/A
15 UTP																							
F00	R2	Living Room	W3	↓	26.0	23.3	2.7	0.90															
		Living Room	W4	↘	30.8	26.1	4.7	0.85															
		Living Room	W5	→	25.8	22.6	3.2	0.88	27.5	24.0	3.5	0.87	98%	65%	6.35	0.67	65	57	N/A	N/A	21	16	N/A
F01	R1	Living Room	W1	↘	34.2	29.5	N/A	N/A															
		Living Room	W2	↘	34.7	29.8	N/A	N/A															
		Living Room	W3	↘	34.7	29.8	N/A	N/A	34.5	29.7	N/A	N/A	96%	95%	0.23	0.99	67	61	N/A	N/A	21	17	N/A
F02	R1	Bedroom	W1	↘	37.5	32.8	N/A	N/A	37.5	32.8	N/A	N/A	83%	78%	1.15	0.94	69	65	N/A	N/A	23	20	N/A
17 UTP																							
F00	R1	Living Room	W1	↓	26.1	22.9	3.2	0.88															
		Living Room	W2	↘	30.8	26.0	4.8	0.84															
		Living Room	W3	→	26.9	24.0	2.9	0.89	27.9	24.3	3.6	0.87	98%	65%	6.61	0.66	66	57	N/A	N/A	21	15	N/A
F01	R1	Living Room	W1	↘	34.7	29.7	N/A	N/A															
		Living Room	W2	↘	34.7	29.7	N/A	N/A															
		Living Room	W3	↘	34.8	29.8	N/A	N/A	34.7	29.7	N/A	N/A	97%	95%	0.43	0.98	69	61	N/A	N/A	23	17	N/A

Property, room & window attributes				VSC				Mean VSC (room)				NSL				APSH (room)						
Floor	Room	Room use	Window Ref./Orientation	Exis. (% VSC)	Prop. (% VSC)	Loss (% VSC)	Pro./Ex. ratio	Exis. (% VSC)	Prop. (% VSC)	Loss (% VSC)	Pro./Ex. ratio	Exis. (% rm)	Prop. (% rm)	Loss (m^2)	Pro./Ex. ratio	Annual (%APSH) Exis.	Prop.	Loss	Pro./Ex.	Winter (%APSH) Exis.	Prop.	Pro./Ex.
F02	R1	Bedroom	W1 ↘	37.6	32.7	N/A	N/A	37.6	32.7	N/A	N/A	84%	80%	0.92	0.96	69	64	N/A	N/A	23	19	N/A
19 UTP																						
F00	R2	Bedroom	W3 ↓	27.1	23.4	3.7	0.86															
		Bedroom	W4 ↘	30.7	26.2	4.5	0.85															
		Bedroom	W5 →	25.6	23.5	2.1	0.92	27.8	24.4	3.4	0.88	97%	95%	0.29	0.98	69	58	N/A	N/A	23	15	N/A
F01	R1	Living Room	W1 ↘	34.7	29.8	N/A	N/A															
		Living Room	W2 ↘	34.6	29.9	N/A	N/A															
		Living Room	W3 ↘	34.6	29.9	N/A	N/A	34.7	29.9	N/A	N/A	97%	95%	0.63	0.97	69	61	N/A	N/A	23	16	N/A
F02	R1	Bedroom	W1 ↘	37.5	32.8	N/A	N/A	37.5	32.8	N/A	N/A	83%	79%	1.08	0.95	70	66	N/A	N/A	24	20	N/A
21 UTP																						
F00	R1	Living Room	W1 ↓	26.0	22.4	3.6	0.86															
		Living Room	W2 ↘	30.6	26.5	4.1	0.87															
		Living Room	W3 →	26.8	25.2	1.6	0.94	27.8	24.7	3.1	0.89	98%	75%	4.46	0.77	65	58	N/A	N/A	21	15	N/A
F01	R1	Living Room	W1 ↘	34.6	30.2	N/A	N/A															
		Living Room	W2 ↘	34.6	30.3	N/A	N/A															
		Living Room	W3 ↘	34.5	30.5	N/A	N/A	34.6	30.3	N/A	N/A	96%	96%	0.24	0.99	68	62	N/A	N/A	22	16	N/A
F02	R1	Bedroom	W1 ↘	37.4	33.1	N/A	N/A	37.4	33.1	N/A	N/A	84%	81%	0.82	0.96	70	66	N/A	N/A	24	20	N/A
23 UTP																						
F00	R2	Living Room	W3 ↓	27.1	23.9	3.2	0.88															
		Living Room	W4 ↘	30.6	27.6	N/A	N/A															
		Living Room	W5 →	25.6	24.9	0.7	0.97	27.8	25.4	2.4	0.91	97%	87%	2.01	0.90	66	63	N/A	N/A	21	17	N/A
F01	R1	Living Room	W1 ↘	34.5	30.7	N/A	N/A															
		Living Room	W2 ↘	34.4	31.0	N/A	N/A															
		Living Room	W3 ↘	34.4	31.1	N/A	N/A	34.5	30.9	N/A	N/A	97%	96%	0.21	0.99	68	64	N/A	N/A	22	18	N/A
F02	R1	Bedroom	W1 ↘	37.3	33.7	N/A	N/A	37.3	33.7	N/A	N/A	86%	84%	0.47	0.98	70	66	N/A	N/A	24	20	N/A
25 UTP																						
F00	R1	Living Room	W1 ↓	26.2	23.3	2.9	0.89															
		Living Room	W2 ↘	30.6	28.3	N/A	N/A															
		Living Room	W3 →	26.7	26.4	0.3	0.99	27.8	26.0	1.8	0.94	98%	89%	1.71	0.91	64	60	N/A	N/A	20	16	N/A
F01	R1	Bedroom	W1 ↘	34.4	31.5	N/A	N/A															
		Bedroom	W2 ↘	34.3	31.7	N/A	N/A	34.3	31.6	N/A	N/A	97%	97%	0.00	1.00	70	65	N/A	N/A	24	19	N/A
	R2	Bedroom	W3 ↘	34.3	32.0	N/A	N/A	34.3	32.0	N/A	N/A	95%	95%	0.00	1.00	69	65	N/A	N/A	23	19	N/A
F02	R1	Bedroom	W1 ↘	37.2	34.4	N/A	N/A	37.2	34.4	N/A	N/A	86%	85%	0.26	0.99	70	68	N/A	N/A	24	22	N/A
27 UTP																						
F00	R2	Living Room	W3 ↓	27.2	24.9	2.3	0.92															
		Living Room	W4 Inc	30.6	28.8	N/A	N/A															
		Living Room	W5 Inc	25.7	25.4	0.3	0.99	27.8	26.4	1.4	0.95	97%	96%	0.29	0.99	66	62	N/A	N/A	20	16	N/A
F01	R1	Living Room	W1 ↘	34.3	32.1	N/A	N/A															
		Living Room	W2 ↘	34.2	32.2	N/A	N/A															
		Living Room	W3 ↘	34.2	32.3	N/A	N/A	34.2	32.2	N/A	N/A	97%	97%	0.01	1.00	69	65	N/A	N/A	23	19	N/A
F02	R1	Bedroom	W1 ↘	37.0	34.9	N/A	N/A	37.0	34.9	N/A	N/A	85%	85%	0.02	1.00	70	69	N/A	N/A	24	23	N/A
29 UTP																						
F00	R1	Living Room	W1 Inc	26.0	24.0	2.0	0.92															
		Living Room	W2 Inc	30.3	28.8	N/A	N/A															
		Living Room	W3 Inc	26.7	26.5	0.2	0.99	27.7	26.4	1.3	0.95	98%	97%	0.17	0.99	65	61	N/A	N/A	20	16	N/A
F01	R1	Living Room	W1 ↘	34.1	32.4	N/A	N/A															
		Living Room	W2 ↘	34.0	32.5	N/A	N/A															
		Living Room	W3 ↘	34.0	32.6	N/A	N/A	34.0	32.5	N/A	N/A	97%	97%	0.00	1.00	68	65	N/A	N/A	22	19	N/A
F02	R1	Bedroom	W1 ↘	36.8	35.2	N/A	N/A	36.8	35.2	N/A	N/A	87%	87%	0.03	1.00	68	68	N/A	N/A	22	22	N/A
31 UTP																						
F00	R2	Living Room	W2 ↓	26.9	25.3	1.6	0.94															
		Living Room	W3 ↘	30.2	29.2	N/A	N/A															
		Living Room	W4 →	25.6	25.5	0.1	1.00	27.6	26.7	0.9	0.97	97%	97%	0.01	1.00	64	62	N/A	N/A	19	17	N/A
F01	R1	Living Room	W1 ↘	34.0	32.7	N/A	N/A															
		Living Room	W2 ↘	33.9	32.8	N/A	N/A															
		Living Room	W3 ↘	33.9	32.8	N/A	N/A	33.9	32.8	N/A	N/A	97%	97%	0.02	1.00	68	66	N/A	N/A	22	20	N/A
F02	R1	Bedroom	W1 ↘	36.7	35.6	N/A	N/A	36.7	35.6	N/A	N/A	87%	87%	0.01	1.00	69	69	N/A	N/A	23	23	N/A
33 UTP																						
F00	R1	Bedroom	W1 ↓	26.1	24.8	1.3	0.95															
		Bedroom	W2 ↘	30.3	29.5	N/A	N/A															
		Bedroom	W3 →	26.8	26.8	0.0	1.00	27.7	27.0	N/A	N/A	97%	97%	0.00	1.00	63	61	N/A	N/A	18	16	N/A
F01	R1	LKD	W1 ↘	34.0	33.1	N/A	N/A															
		LKD	W2 ↘	34.0	33.2	N/A	N/A															
		LKD	W3 ↘	34.0	33.3	N/A	N/A	34.0	33.2	N/A	N/A	97%	97%	0.00	1.00	68	67	N/A	N/A	22	21	N/A
F02	R1	LKD	W1 ↘	36.7	35.9	N/A	N/A	36.7	35.9	N/A	N/A	92%	92%	0.00	1.00	69	69	N/A	N/A	23	23	N/A

Ratio: N/A or ≥0.8 = inside BRE (N/A* satisfies 4% APSH criterion); N/R = not required

Property, room & window attributes				VSC				Mean VSC (room)				NSL				APSH (room)						
Floor	Room	Room use	Window Ref./Orientation	Exis. (% VSC)	Prop. (% VSC)	Loss (% VSC)	Pro./Ex. ratio	Exis. (% VSC)	Prop. (% VSC)	Loss (% VSC)	Pro./Ex. ratio	Exis. (% rm)	Prop. (% rm)	Loss (m^2)	Pro./Ex. ratio	Annual (%APSH) Exis.	Prop.	Loss	Pro./Ex.	Winter (%APSH) Exis.	Prop.	Pro./Ex.
22 UTP																						
F00	R1	Bedroom	W1 ↘	18.4	13.0	5.4	0.71	18.4	13.0	5.4	0.71	89%	87%	0.42	0.97	45	21	24	0.47	16	3	0.19
	R2	Kitchen	W2 ↙	14.3	5.9	8.4	0.41	14.3	5.9	8.4	0.41	49%	5%	2.33	0.10	51	20	31	0.39	15	3	0.20
	R3	Living Room	W3 ↙	14.8	6.9	7.9	0.47															
		Living Room	W4 ↙	19.2	9.6	9.6	0.50															
		Living Room	W5 ↘	32.6	28.0	N/A	N/A	22.2	14.8	7.4	0.67	99%	98%	0.20	0.98	70	50	N/A	N/A	18	7	N/A
F01	R1	Bedroom	W1 ↘	22.4	16.7	5.7	0.75	22.4	16.7	5.7	0.75	87%	84%	0.36	0.97	51	29	N/A	N/A	22	7	N/A
	R3	Bedroom	W3 ↘	35.5	31.1	N/A	N/A	35.5	31.1	N/A	N/A	92%	91%	0.04	0.99	70	55	N/A	N/A	24	9	N/A
F02	R1	Bedroom	W1 ↘	37.7	33.2	N/A	N/A	37.7	33.2	N/A	N/A	95%	93%	0.19	0.99	69	54	N/A	N/A	24	13	N/A
	R3	Bedroom	W3 ↘	37.1	33.6	N/A	N/A	37.1	33.6	N/A	N/A	94%	94%	0.00	1.00	69	61	N/A	N/A	24	16	N/A
24 UTP																						
F00	R1	Bedroom	W1 ↘	18.9	16.9	2.0	0.89	18.9	16.9	2.0	0.89	98%	96%	0.18	0.99	38	32	N/A	N/A	14	8	N/A
F01	R1	Bedroom	W1 ↘	35.7	32.6	N/A	N/A	35.7	32.6	N/A	N/A	92%	92%	0.00	1.00	70	61	N/A	N/A	24	15	N/A
F02	R2	Bedroom	W2 ↘	37.7	36.2	N/A	N/A	37.7	36.2	N/A	N/A	95%	95%	0.00	1.00	69	67	N/A	N/A	24	22	N/A
	R3	Bedroom	W3 ↘	37.1	34.8	N/A	N/A	37.1	34.8	N/A	N/A	95%	95%	0.00	1.00	69	64	N/A	N/A	24	19	N/A
26 UTP																						
F00	R1	Bedroom	W1 ↘	18.1	17.3	0.8	0.96	18.1	17.3	0.8	0.96	88%	88%	0.00	1.00	35	33	N/A	N/A	11	9	N/A
	R2	Bedroom	W2 ↙	13.0	11.5	1.5	0.88	13.0	11.5	1.5	0.88	75%	73%	0.23	0.97	36	32	N/A	N/A	14	10	N/A
	R3	Kitchen	W3 ↙	21.4	17.1	4.3	0.80	21.4	17.1	4.3	0.80	69%	62%	0.50	0.90	46	37	N/A	N/A	20	12	N/A
F01	R1	Bedroom	W1 ↘	21.7	21.1	0.6	0.97	21.7	21.1	0.6	0.97	87%	87%	0.00	1.00	46	45	N/A	N/A	18	17	N/A
	R3	Bedroom	W3 ↘	35.7	34.3	N/A	N/A	35.7	34.3	N/A	N/A	100%	100%	0.00	1.00	68	65	N/A	N/A	23	20	N/A
F02	R1	Bedroom	W1 ↘	37.5	36.5	N/A	N/A															
		Bedroom	W2 ↘	37.3	36.4	N/A	N/A	37.4	36.5	N/A	N/A	96%	96%	0.00	1.00	69	68	N/A	N/A	24	23	N/A
	R3	Bedroom	W2 ↘	37.3	36.4	N/A	N/A															
		Bedroom	W3 ↘	37.0	36.3	N/A	N/A															
		Bedroom	W4 ↘	37.5	36.5	N/A	N/A	37.3	36.4	N/A	N/A	100%	100%	0.00	1.00	70	69	N/A	N/A	24	23	N/A
28 UTP																						
F00	R1	Bedroom	W1 ↘	28.9	27.7	N/A	N/A	28.9	27.7	N/A	N/A	96%	96%	0.03	1.00	57	53	N/A	N/A	17	13	N/A
F01	R1	Bedroom	W1 ↘	35.5	34.5	N/A	N/A	35.5	34.5	N/A	N/A	99%	99%	0.00	1.00	67	66	N/A	N/A	22	21	N/A
F02	R2	Bedroom	W2 ↘	37.3	37.2	N/A	N/A	37.3	37.2	N/A	N/A	94%	94%	0.00	1.00	69	68	N/A	N/A	24	23	N/A
	R3	Bedroom	W1 ↘	36.7	36.7	N/A	N/A															
		Bedroom	W3 ↘	37.4	36.6	N/A	N/A	37.0	36.6	N/A	N/A	99%	99%	0.00	1.00	70	69	N/A	N/A	24	23	N/A
30 UTP																						
F00	R1	Bedroom	W1 ↘	23.0	22.8	0.2	0.99	23.0	22.8	0.2	0.99	94%	94%	0.00	1.00	41	41	N/A	N/A	12	12	N/A
	R2	Bedroom	W2 ↙	9.7	9.2	0.5	0.95	9.7	9.2	0.5	0.95	76%	76%	0.00	1.00	20	19	1	0.95	5	4	N/A*
	R3	Kitchen	W3 ↙	21.3	19.5	1.8	0.92															
		Kitchen	W4 ↘	26.0	25.3	0.7	0.97	23.6	22.4	1.2	0.95	99%	98%	0.08	0.99	60	58	N/A	N/A	21	19	N/A
F01	R1	Bedroom	W1 ↘	34.1	33.8	N/A	N/A	34.1	33.8	N/A	N/A	95%	95%	0.00	1.00	63	63	N/A	N/A	19	19	N/A
F02	R1	Bedroom	W1 ↘	37.7	37.3	N/A	N/A	37.7	37.3	N/A	N/A	92%	92%	0.00	1.00	69	68	N/A	N/A	24	23	N/A
1 Victoria Trc																						
F00	R1	Kitchen	W1 ↙	22.7	20.7	2.0	0.91	22.7	20.7	2.0	0.91	96%	96%	0.00	1.00	27	23	4	0.85	5	2	N/A*
	R3	Living Room	W4 ↙	22.3	19.9	2.4	0.89	22.3	19.9	2.4	0.89	88%	87%	0.07	0.99	45	43	N/A	N/A	15	13	N/A
F01	R1	Bedroom	W1 ↙	35.0	32.7	N/A	N/A	35.0	32.7	N/A	N/A	98%	98%	0.00	1.00	62	58	N/A	N/A	24	20	N/A
	R9	Bedroom	W3 ↙	35.3	33.0	N/A	N/A	35.3	33.0	N/A	N/A	95%	95%	0.00	1.00	64	60	N/A	N/A	24	20	N/A
2 Victoria Trc																						
F00	R1	Living Room	W1 ↙	24.5	22.1	2.4	0.90	24.5	22.1	2.4	0.90	90%	90%	0.00	1.00	28	26	2	N/A	4	2	N/A*
	R3	Kitchen	W3 ↙	20.9	18.9	2.0	0.90	20.9	18.9	2.0	0.90	89%	89%	0.00	1.00	43	42	N/A	N/A	14	13	N/A
F01	R1	Bedroom	W1 ↙	33.9	31.9	N/A	N/A	33.9	31.9	N/A	N/A	93%	93%	0.00	1.00	61	58	N/A	N/A	20	17	N/A
	R3	Bedroom	W3 ↙	32.0	30.4	N/A	N/A	32.0	30.4	N/A	N/A	96%	96%	0.00	1.00	58	57	N/A	N/A	22	21	N/A
F02	R1	Bedroom	W1 ↙	37.7	36.0	N/A	N/A	37.7	36.0	N/A	N/A	89%	89%	0.00	1.00	67	65	N/A	N/A	24	22	N/A
3 Victoria Trc																						
F00	R1	Kitchen	W1 ↙	23.2	20.7	2.5	0.89	23.2	20.7	2.5	0.89	95%	95%	0.00	1.00	32	29	3	N/A	7	4	N/A*
	R3	Living Room	W5 ↙	24.2	22.1	2.1	0.91	24.2	22.1	2.1	0.91	86%	86%	0.01	1.00	48	46	N/A	N/A	15	13	N/A
F01	R1	Bedroom	W1 ↙	33.3	31.2	N/A	N/A	33.3	31.2	N/A	N/A	97%	97%	0.00	1.00	57	55	N/A	N/A	16	14	N/A
	R4	Bedroom	W4 ↙	34.9	33.2	N/A	N/A	34.9	33.2	N/A	N/A	93%	93%	0.00	1.00	64	62	N/A	N/A	23	21	N/A
F02	R12	Bedroom	W4 ↙	37.6	35.9	N/A	N/A	37.6	35.9	N/A	N/A	100%	100%	0.00	1.00	66	63	N/A	N/A	24	22	N/A
4 Victoria Trc																						
F00	R1	Dining Room	W1 ↙	24.4	21.9	2.5	0.90	24.4	21.9	2.5	0.90	96%	96%	0.00	1.00	32	29	3	N/A	6	4	N/A*
	R4	Kitchen	W4 ↙	16.9	16.8	0.1	0.99	16.9	16.8	0.1	0.99	95%	95%	0.00	1.00	34	34	N/A	N/A	5	5	N/A
F01	R1	Bedroom	W1 ↙	33.9	31.8	N/A	N/A	33.9	31.8	N/A	N/A	93%	93%	0.00	1.00	56	54	N/A	N/A	15	14	N/A
	R2	Bedroom	W2 ↙	33.8	31.4	N/A	N/A	33.8	31.4	N/A	N/A	91%	91%	0.00	1.00	61	59	N/A	N/A	21	20	N/A
	R3	Bedroom	W3 ↙	30.9	29.6	N/A	N/A	30.9	29.6	N/A	N/A	97%	97%	0.00	1.00	58	56	N/A	N/A	22	20	N/A
F02	R1	Bedroom	W1 ↙	37.0	35.4	N/A	N/A	37.0	35.4	N/A	N/A	81%	80%	0.04	1.00	66	64	N/A	N/A	24	22	N/A
5 Victoria Trc																						
F00	R1	Kitchen	W1 ↙	10.9	10.6	0.3	0.97	10.9	10.6	0.3	0.97	94%	94%	0.00	1.00	17	16	1	0.94	2	1	N/A*

Ratio: N/A or ≥0.8 = inside BRE (N/A* satisfies 4% APSH criterion); N/R = not required

Property, room & window attributes				VSC				Mean VSC (room)				NSL				APSH (room)						
Floor	Room	Room use	Window Ref./Orientation	Exis. (% VSC)	Prop. (% VSC)	Loss (% VSC)	Pro./Ex. ratio	Exis. (% VSC)	Prop. (% VSC)	Loss (% VSC)	Pro./Ex. ratio	Exis. (% rm)	Prop. (% rm)	Loss (m^2)	Pro./Ex. ratio	Annual (%APSH) Exis.	Prop.	Loss	Pro./Ex.	Winter (%APSH) Exis.	Prop.	Pro./Ex.
	R3	Living Room	W3 ↙	22.9	21.8	1.1	0.95	22.9	21.8	1.1	0.95	91%	91%	0.01	1.00	48	47	N/A	N/A	16	15	N/A
F01	R1	Bedroom	W1 ↙	28.7	26.9	1.8	0.94	28.7	26.9	1.8	0.94	98%	98%	0.00	1.00	42	39	N/A	N/A	7	5	N/A
	R3	Bedroom	W3 ↙	30.7	29.7	N/A	N/A	30.7	29.7	N/A	N/A	95%	95%	0.00	1.00	55	55	N/A	N/A	20	20	N/A
6 Victoria Trc																						
F00	R2	Kitchen	W3 ↙	27.1	26.1	1.0	0.96	27.1	26.1	1.0	0.96	97%	97%	0.00	1.00	56	55	N/A	N/A	19	18	N/A
F01	R1	Bedroom	W1 ↙	30.6	29.2	N/A	N/A	30.6	29.2	N/A	N/A	91%	91%	0.00	1.00	46	45	N/A	N/A	8	8	N/A
	R3	Bedroom	W3 ↙	31.7	30.9	N/A	N/A	31.7	30.9	N/A	N/A	98%	98%	0.00	1.00	57	57	N/A	N/A	22	22	N/A
28 Perth Rd																						
F00	R1	Kitchen	W1 ↖	33.8	33.0	N/A	N/A	33.8	33.0	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Kitchen	W2 ↖	33.6	32.6	N/A	N/A	33.6	32.6	N/A	N/A	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F01	R1	Bedroom	W1 ↖	37.1	36.3	N/A	N/A	37.1	36.3	N/A	N/A	94%	94%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F02	R1	Bedroom	W1 ↖	38.3	37.6	N/A	N/A	38.3	37.6	N/A	N/A	94%	94%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
26 Perth Rd																						
F00	R1	Kitchen	W1 ↖	33.8	32.9	N/A	N/A															
		Kitchen	W2 ↖	33.8	32.8	N/A	N/A															
		Kitchen	W3 Inc	69.3	68.8	N/A	N/A	45.7	44.8	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F01	R1	Bedroom	W1 ↖	37.0	36.1	N/A	N/A	37.0	36.1	N/A	N/A	94%	94%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F02	R1	Bedroom	W1 ↖	38.3	37.5	N/A	N/A	38.3	37.5	N/A	N/A	93%	93%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
24 Perth Rd																						
F00	R1	Kitchen	W1 ↖	26.9	26.0	0.9	0.97	26.9	26.0	0.9	0.97	96%	96%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Kitchen	W2 ↖	27.5	27.1	N/A	N/A	27.5	27.1	N/A	N/A	90%	90%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F01	R1	Bedroom	W1 ↖	36.9	35.9	N/A	N/A	36.9	35.9	N/A	N/A	95%	95%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F02	R1	Bedroom	W1 ↖	38.1	37.3	N/A	N/A	38.1	37.3	N/A	N/A	94%	94%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
22 Perth Rd																						
F00	R1	Kitchen	W1 ↖	33.3	31.5	N/A	N/A															
		Kitchen	W2 Inc	66.7	66.0	N/A	N/A															
		Kitchen	W3 Inc	68.1	67.3	N/A	N/A	56.0	54.9	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F01	R1	Bedroom	W1 ↖	36.8	35.4	N/A	N/A	36.8	35.4	N/A	N/A	95%	95%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F02	R1	Bedroom	W1 ↖	38.2	37.1	N/A	N/A	38.2	37.1	N/A	N/A	94%	94%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
20 Perth Rd																						
F00	R1	Kitchen	W1 ↖	28.2	26.2	2.0	0.93	28.2	26.2	2.0	0.93	94%	94%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Kitchen	W2 ↖	27.5	26.2	1.3	0.95	27.5	26.2	1.3	0.95	88%	88%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F01	R1	Bedroom	W1 ↖	36.7	35.1	N/A	N/A	36.7	35.1	N/A	N/A	95%	95%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F02	R1	Bedroom	W1 ↖	38.3	37.0	N/A	N/A	38.3	37.0	N/A	N/A	95%	95%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
18 Perth Rd																						
F00	R1	Kitchen	W1 ↖	33.6	30.0	N/A	N/A															
		Kitchen	W2 ↖	33.6	30.4	N/A	N/A	33.6	30.2	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F01	R1	Bedroom	W1 ↖	36.7	34.5	N/A	N/A	36.7	34.5	N/A	N/A	95%	95%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F02	R1	Bedroom	W1 ↖	38.2	36.7	N/A	N/A	38.2	36.7	N/A	N/A	95%	95%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
16 Perth Rd																						
F00	R1	Kitchen	W1 ↖	32.5	28.4	N/A	N/A															
		Kitchen	W2 ↖	28.9	25.2	3.7	0.87	30.7	26.8	3.9	0.87	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F01	R1	Bedroom	W1 ↖	32.6	31.5	N/A	N/A	32.6	31.5	N/A	N/A	94%	94%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F02	R1	Bedroom	W1 ↖	38.2	36.6	N/A	N/A	38.2	36.6	N/A	N/A	95%	95%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
14 Perth Rd																						
F00	R1	Kitchen	W1 ↖	33.0	27.6	N/A	N/A															
		Kitchen	W2 ↖	33.1	27.6	N/A	N/A															
		Kitchen	W3 ↖	32.0	26.4	5.6	0.83	32.7	27.2	N/A	N/A	100%	59%	9.19	0.59	North	North	N/A	N/A	North	North	N/A
F01	R1	Bedroom	W1 ↖	31.4	29.1	N/A	N/A	31.4	29.1	N/A	N/A	95%	95%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F02	R1	Bedroom	W1 ↖	38.1	36.3	N/A	N/A	38.1	36.3	N/A	N/A	95%	95%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
12 Perth Rd																						
F00	R1	Living Room	W1 ↖	33.7	27.6	N/A	N/A															
		Living Room	W2 ↖	33.7	27.6	N/A	N/A															
		Living Room	W3 ↖	33.8	27.6	N/A	N/A															
		Living Room	W4 Inc	38.5	37.9	N/A	N/A	34.9	30.2	N/A	N/A	100%	100%	0.00	1.00	21	16	5	0.76	1	1	1.00
F01	R1	Bedroom	W1 ↖	30.1	28.2	N/A	N/A	30.1	28.2	N/A	N/A	93%	93%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F02	R1	Bedroom	W1 ↖	37.5	35.7	N/A	N/A	37.5	35.7	N/A	N/A	93%	93%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
10 Perth Rd																						
F00	R1	LKD	W1 ↖	33.8	27.6	N/A	N/A	33.8	27.6	N/A	N/A	87%	39%	22.80	0.45	North	North	N/A	N/A	North	North	N/A
F01	R1	Bedroom	W1 ↖	28.7	26.6	2.1	0.93	28.7	26.6	2.1	0.93	94%	94%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F02	R1	Bedroom	W1 ↖	38.0	36.2	N/A	N/A	38.0	36.2	N/A	N/A	95%	95%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F03	R1	Bedroom	W1 ↖	33.8	32.9	N/A	N/A															
		Bedroom	W2 ↖	36.3	35.4	N/A	N/A															

Property, room & window attributes					VSC				Mean VSC (room)				NSL				APSH (room)						
Floor	Room	Room use	Window Ref./Orientation		Exis. (% VSC)	Prop. (% VSC)	Loss (% VSC)	Pro./Ex. ratio	Exis. (% VSC)	Prop. (% VSC)	Loss (% VSC)	Pro./Ex. ratio	Exis. (% rm)	Prop. (% rm)	Loss (m^2)	Pro./Ex. ratio	Annual (%APSH) Exis.	Prop.	Loss	Pro./Ex.	Winter (%APSH) Exis.	Prop.	Pro./Ex.
		Bedroom	W4	Inc	61.2	61.2	N/A	N/A															
		Bedroom	W5	Inc	85.5	85.5	N/A	N/A	54.2	53.8	N/A	N/A	96%	96%	0.00	1.00	77	77	N/A	N/A	17	17	N/A
8 Perth Rd																							
F00	R1	Living Room	W1	↖	24.7	21.7	3.0	0.88															
		Living Room	W2	↖	23.7	21.2	2.5	0.89	24.2	21.5	2.7	0.89	95%	80%	2.07	0.83	North	North	N/A	N/A	North	North	N/A
	R2	Kitchen	W3	↖	19.1	15.7	3.4	0.82	19.1	15.7	3.4	0.82	80%	55%	1.93	0.69	North	North	N/A	N/A	North	North	N/A
F01	R1	Living Room	W1	↖	34.4	31.6	N/A	N/A	34.4	31.6	N/A	N/A	97%	97%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Kitchen	W2	↖	24.0	21.0	3.0	0.88	24.0	21.0	3.0	0.88	96%	96%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F02	R1	Living Room	W1	↖	38.2	36.6	N/A	N/A	38.2	36.6	N/A	N/A	97%	97%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Kitchen	W2	↖	31.3	29.4	N/A	N/A	31.3	29.4	N/A	N/A	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F03	R1	Living Room	W1	↖	39.0	38.1	N/A	N/A	39.0	38.1	N/A	N/A	97%	97%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Kitchen	W2	↖	38.8	37.8	N/A	N/A	38.8	37.8	N/A	N/A	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
6 Perth Rd																							
F00	R1	Kitchen	W2	↖	33.8	29.1	N/A	N/A	33.8	29.1	N/A	N/A	97%	91%	0.37	0.94	North	North	N/A	N/A	North	North	N/A
	R2	Living Room	W1	↖	29.5	25.8	3.7	0.87	29.5	25.8	3.7	0.87	96%	84%	1.97	0.87	North	North	N/A	N/A	North	North	N/A
F01	R1	Living Room	W1	↖	27.8	26.5	1.3	0.95	27.8	26.5	1.3	0.95	97%	97%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Kitchen	W2	↖	37.1	34.7	N/A	N/A	37.1	34.7	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F02	R1	Living Room	W1	↖	37.8	36.5	N/A	N/A	37.8	36.5	N/A	N/A	97%	97%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F03	R1	Living Room	W1	↖	39.1	38.4	N/A	N/A	39.1	38.4	N/A	N/A	97%	97%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Kitchen	W2	↖	38.8	37.9	N/A	N/A	38.8	37.9	N/A	N/A	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
4 Perth Rd																							
F00	R1	Living Room	W1	↖	31.2	28.0	N/A	N/A	31.2	28.0	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Kitchen	W2	↖	19.1	16.7	2.4	0.87	19.1	16.7	2.4	0.87	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F01	R1	Living Room	W1	↖	22.1	20.2	1.9	0.91	22.1	20.2	1.9	0.91	85%	85%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Kitchen	W2	↖	23.0	21.5	1.5	0.93	23.0	21.5	1.5	0.93	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F02	R1	Living Room	W1	↖	28.0	26.8	1.2	0.96	28.0	26.8	1.2	0.96	96%	96%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Kitchen	W2	↖	37.5	36.0	N/A	N/A	37.5	36.0	N/A	N/A	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F03	R1	Living Room	W1	↖	39.1	38.4	N/A	N/A	39.1	38.4	N/A	N/A	97%	97%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Kitchen	W2	↖	38.7	37.9	N/A	N/A	38.7	37.9	N/A	N/A	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
2 Perth Rd																							
F00	R1	Kitchen	W1	↖	19.5	17.4	2.1	0.89	19.5	17.4	2.1	0.89	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Conservatory	W2	↗	14.9	13.1	1.8	0.88															
		Conservatory	W3	↖	30.3	27.8	N/A	N/A															
		Conservatory	W4	↙	26.9	26.9	0.0	1.00															
		Conservatory	W5	Inc	76.3	75.4	N/A	N/A	37.1	35.8	N/A	N/A	100%	100%	0.00	1.00	56	56	N/A	N/A	16	16	N/A
	R3	Living Room	W2	↗	14.9	13.1	1.8	0.88															
		Living Room	W3	↖	30.3	27.8	N/A	N/A															
		Living Room	W4	↙	26.9	26.9	0.0	1.00															
		Living Room	W5	Inc	76.3	75.4	N/A	N/A	37.1	35.8	N/A	N/A	100%	100%	0.00	1.00	56	56	N/A	N/A	16	16	N/A
F01	R1	Living Room	W1	↖	25.1	24.8	0.3	0.99	25.1	24.8	0.3	0.99	97%	97%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Kitchen	W2	↖	32.5	31.1	N/A	N/A	32.5	31.1	N/A	N/A	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F02	R1	Living Room	W1	↖	37.1	36.1	N/A	N/A	37.1	36.1	N/A	N/A	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Kitchen	W2	↖	26.9	26.3	0.6	0.98	26.9	26.3	0.6	0.98	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F03	R1	Living Room	W1	↖	39.0	38.4	N/A	N/A	39.0	38.4	N/A	N/A	96%	96%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Kitchen	W2	↖	38.7	37.8	N/A	N/A	38.7	37.8	N/A	N/A	99%	99%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
82 Stroud Gr Rd																							
F00	R2	LKD	W2	↗	20.8	20.6	0.2	0.99	20.8	20.6	0.2	0.99	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F01	R1	Bedroom	W1	↗	27.6	27.5	N/A	N/A	27.6	27.5	N/A	N/A	93%	93%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F02	R1	Bedroom	W1	↗	37.3	36.3	N/A	N/A	37.3	36.3	N/A	N/A	94%	94%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F03	R1	Bedroom	W1	↗	38.7	38.2	N/A	N/A	38.7	38.2	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
84 Stroud Gr Rd																							
F01	R1	LK	W1	↖	30.4	29.3	N/A	N/A	30.4	29.3	N/A	N/A	92%	92%	0.10	0.99	North	North	N/A	N/A	North	North	N/A
F02	R1	Kitchen	W1	↗	33.6	32.7	N/A	N/A	33.6	32.7	N/A	N/A	100%	100%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F03	R1	Kitchen	W1	↗	38.1	37.5	N/A	N/A	38.1	37.5	N/A	N/A	87%	87%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
86 Stroud Gr Rd																							
F00	R1	Kitchen	W1	↗	13.0	13.0	0.0	1.00	13.0	13.0	0.0	1.00	17%	17%	0.03	0.98	North	North	N/A	N/A	North	North	N/A
F01	R1	Kitchen	W1	↗	24.2	22.8	1.4	0.94	24.2	22.8	1.4	0.94	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F02	R1	Bedroom	W1	↗	37.7	36.6	N/A	N/A	37.7	36.6	N/A	N/A	95%	95%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F03	R1	Bedroom	W1	↗	39.0	38.3	N/A	N/A	39.0	38.3	N/A	N/A	91%	91%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
88 Stroud Gr Rd																							
F01	R1	Living Room	W1	↗	23.2	22.4	0.8	0.97	23.2	22.4	0.8	0.97	86%	86%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F02	R1	Bedroom	W1	↗	37.7	36.5	N/A	N/A	37.7	36.5	N/A	N/A	95%	95%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F03	R1	Bedroom	W1	↗	39.0	38.3	N/A	N/A	39.0	38.3	N/A	N/A	91%	91%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
90 Stroud Gr Rd																							
F01	R1	Kitchen	W1	↗	34.1	31.9	N/A	N/A	34.1	31.9	N/A	N/A	98%	86%	1.25	0.88	North	North	N/A	N/A	North	North	N/A

Property, room & window attributes				VSC				Mean VSC (room)				NSL				APSH (room)						
Floor	Room	Room use	Window Ref./Orientation	Exis. (% VSC)	Prop. (% VSC)	Loss (% VSC)	Pro./Ex. ratio	Exis. (% VSC)	Prop. (% VSC)	Loss (% VSC)	Pro./Ex. ratio	Exis. (% rm)	Prop. (% rm)	Loss (m^2)	Pro./Ex. ratio	Annual (%APSH) Exis.	Prop.	Loss	Pro./Ex.	Winter (%APSH) Exis.	Prop.	Pro./Ex.
	R2	Living Room	W2 ↗	33.1	31.0	N/A	N/A	33.1	31.0	N/A	N/A	98%	88%	1.11	0.89	North	North	N/A	N/A	North	North	N/A
F03	R1	Bedroom	W1 ↗	39.1	38.2	N/A	N/A	39.1	38.2	N/A	N/A	88%	88%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
92 Stroud Gr Rd																						
F01	R1	Living Room	W1 ↗	30.5	28.7	N/A	N/A	30.5	28.7	N/A	N/A	89%	79%	1.08	0.89	North	North	N/A	N/A	North	North	N/A
	R2	Kitchen	W2 ↗	26.5	25.6	0.9	0.97	26.5	25.6	0.9	0.97	68%	61%	0.68	0.90	North	North	N/A	N/A	North	North	N/A
F02	R1	Bedroom	W2 ↗	37.3	36.0	N/A	N/A	37.3	36.0	N/A	N/A	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Bedroom	W1 ↗	36.4	35.0	N/A	N/A	36.4	35.0	N/A	N/A	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F03	R1	Bedroom	W1 ↗	39.1	38.1	N/A	N/A	39.1	38.1	N/A	N/A	88%	88%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
94 Stroud Gr Rd																						
F01	R1	Bedsit	W1 ↗	18.8	18.0	0.8	0.96	18.8	18.0	0.8	0.96	93%	93%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F02	R1	Bedsit	W1 ↗	34.7	33.0	N/A	N/A	34.7	33.0	N/A	N/A	96%	96%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R4	Kitchen	W3 ↖	19.5	19.1	0.4	0.98	19.5	19.1	0.4	0.98	61%	60%	0.03	0.99	North	North	N/A	N/A	North	North	N/A
F03	R1	Bedsit	W1 ↗	37.8	36.7	N/A	N/A	37.8	36.7	N/A	N/A	92%	92%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
96 Stroud Gr Rd																						
F01	R1	Living Room	W1 ↗	20.2	19.2	1.0	0.95	20.2	19.2	1.0	0.95	92%	92%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F02	R1	Bedroom	W1 ↗	31.0	29.2	N/A	N/A	31.0	29.2	N/A	N/A	94%	94%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F03	R1	Bedroom	W1 ↗	36.1	35.0	N/A	N/A	36.1	35.0	N/A	N/A	93%	93%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
98 Stroud Gr Rd																						
F01	R1	Living Room	W1 ↗	26.4	24.5	1.9	0.93	26.4	24.5	1.9	0.93	95%	95%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F02	R1	Bedroom	W1 ↗	37.2	35.2	N/A	N/A	37.2	35.2	N/A	N/A	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F03	R1	Bedroom	W1 ↗	39.0	37.7	N/A	N/A	39.0	37.7	N/A	N/A	91%	91%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
100 Stroud Gr Rd																						
F01	R1	Living Room	W1 ↗	17.2	17.2	0.0	1.00	17.2	17.2	0.0	1.00	86%	86%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Bedroom	W2 ↗	35.6	32.7	N/A	N/A	35.6	32.7	N/A	N/A	97%	97%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R3	Living Room	W3 ↗	27.6	27.2	N/A	N/A	27.6	27.2	N/A	N/A	88%	81%	0.66	0.92	North	North	N/A	N/A	North	North	N/A
	R4	Kitchen	W2 ↗	35.6	32.7	N/A	N/A															
		Kitchen	W4 ↗	27.9	27.1	N/A	N/A	31.7	29.9	N/A	N/A	87%	74%	1.17	0.85	North	North	N/A	N/A	North	North	N/A
F02	R1	Bedroom	W1 ↗	36.8	34.7	N/A	N/A	36.8	34.7	N/A	N/A	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F03	R1	Bedroom	W1 ↗	39.0	37.5	N/A	N/A	39.0	37.5	N/A	N/A	91%	91%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
102 Stroud Gr Rd																						
F01	R1	Living Room	W1 ↗	24.6	22.4	2.2	0.91	24.6	22.4	2.2	0.91	95%	95%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F02	R1	Bedroom	W1 ↗	36.5	34.3	N/A	N/A	36.5	34.3	N/A	N/A	98%	98%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
F03	R1	Bedroom	W1 ↗	38.9	37.4	N/A	N/A	38.9	37.4	N/A	N/A	90%	90%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
104 Stroud Gr Rd																						
F01	R1	Living Room	W1 ↘	28.9	28.3	N/A	N/A															
		Living Room	W2 ↗	29.5	24.7	4.8	0.84	29.2	26.5	2.7	0.91	99%	99%	0.01	1.00	54	53	N/A	N/A	10	10	N/A
	R2	Bedroom	W3 ↗	27.0	22.1	4.9	0.82	27.0	22.1	4.9	0.82	90%	68%	1.91	0.76	North	North	N/A	N/A	North	North	N/A
F02	R1	Bedroom	W1 ↗	36.3	34.3	N/A	N/A	36.3	34.3	N/A	N/A	97%	97%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Kitchen	W2 ↘	24.9	24.4	0.5	0.98	24.9	24.4	0.5	0.98	74%	74%	0.01	1.00	40	39	1	N/A	4	4	N/A*
F03	R1	Bedroom	W1 ↗	38.8	37.4	N/A	N/A	38.8	37.4	N/A	N/A	90%	90%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
106 Stroud Gr Rd																						
F01	R1	Kitchen	W1 ↗	28.1	26.9	1.2	0.96	28.1	26.9	1.2	0.96	83%	83%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R2	Bedroom	W2 ↗	25.4	24.8	0.6	0.98	25.4	24.8	0.6	0.98	59%	59%	0.00	1.00	North	North	N/A	N/A	North	North	N/A
	R4	Living Room	W4 ↘	25.2	25.1	0.1	1.00															
		Living Room	W5 ↘	27.6	27.5	N/A	N/A	26.4	26.3	0.1	1.00	96%	96%	0.00	1.00	51	51	N/A	N/A	10	10	N/A
2-4 UTP																						
F01	R1	Living Room	W1 ↘	32.5	29.7	N/A	N/A	32.5	29.7	N/A	N/A	94%	94%	0.00	1.00	63	59	N/A	N/A	18	18	N/A
F02	R1	Bedroom	W1 ↘	36.3	34.3	N/A	N/A	36.3	34.3	N/A	N/A	95%	95%	0.00	1.00	67	63	N/A	N/A	23	23	N/A

Ratio: N/A or ≥0.8 = inside BRE (N/A* satisfies 4% APSH criterion); N/R = not required