# CAMBRIDGE ROAD ESTATE – PLANNING APPLICATION 20/02942/FUL

# EXTERNAL DAYLIGHT AND SUNLIGHT ASSESSMENT OF ILLUSTRATIVE MASTERPLAN – MARCH 2021

## **UPDATED DOCUMENT**

**A revised External Daylight and Sunlight Assessment of the Illustrative Masterplan was issued in March 2021 and has not been subject to any revisions since.**

**The conclusions between the November 2021 revision and March 2021 revision have not changed.**

gia CHARTERED SURVEYORS

# DAYLIGHT & SUNLIGHT

## IMPACT ON NEIGHBOURING PROPERTIES ADDENDUM REPORT - ILLUSTRATIVE SCHEME

### Cambridge Road Estate

Cambridge Road (RBK) LLP

**January 2021**

GIA No: **14047** Fee Quote: **FP**01

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| Architect | **Patel Taylor** |
| Project Title | **Cambridge Road Estate** |
| Project Number | **14047** |

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## APPENDICES (BOUND SEPARATELY)

# 1 EXECUTIVE SUMMARY

GIA have assessed the proposed Illustrative Patel Taylor scheme "proposed development" for the Cambridge Road Estate site to understand the potential changes in light to the relevant surrounding properties.

1.1 GIA have been instructed by Cambridge Road (RBK) LLP to provide daylight, sunlight and overshadowing advice in relation to the Cambridge Road Estate development in Royal Borough of Kingston Upon Thames. This report is intended to provide details of the impacts to the neighbouring properties and amenity areas that would arise from the Illustrative Scheme. The ES Chapter 9 sets out the maximum parameters and presents the "worse case scenario". This Report is intended to demonstrate the impacts of the scheme that is likely to come forward at the detailed design stages through the application of the design codes and that in the majority of circumstances the worst case scenario discussed in Chapter 9 of the ES is unlikely to be reached.

1.2 The requirement in London boroughs for significantly more living and working spaces necessitates higher density development. The Site is located within the Royal Borough of Kingston Upon Thames and the site is considered in both the Kingston Core Strategy (April 2012) and the Intend to Publish London Plan (December 2019) as an opportunity area for increase housing density and regeneration. It is this key allocation of increased density requirement that needs to be considered (along with other national and London policy outlined in Section 3.0 of this report) against the daylight and sunlight results of this report in tandem with the wider benefits planned for this development site.

1.3 This report is solely for illustrative purposes to understand what the potential future impact will be to the neighbours and to provide comfort that the design stages of the Reserved Matters Applications, when adhering to the design codes, will improve on the "worst case" scenario of the maximum massing.

1.4 Against the maximum parameter scheme submitted and discussed in Chapter 9 of the Environmental Statement, the following impacts will be experienced:

- 33 of 150 properties are Negligible
- 43 of 150 properties are Minor Adverse
- 33 of 150 properties are Moderate Adverse
- 41 of 150 properties are Major Adverse

1.5 This report serves as a comparison document to the Max Parameter scheme as to how the design scheme may be when adhering to the Design Codes submitted as part of the planning application. Against the Illustrative Scheme for Cambridge Road Esate the following impacts will be experienced:

- 69 of 150 properties are Negligible
- 67 of 150 properties are Minor Adverse
- 13 of 150 properties are Moderate Adverse
- 1 of 150 properties is Major Adverse

1.6 Those properties which are considered Negligible will adhere to the assessment criteria outlined in the BRE Guidelines. The properties considered Minor Adverse, will experience transgressions in daylight or sunlight, however, the losses are either marginally above the alteration allowance of the BRE, or the retained levels of daylight and sunlight are considered acceptable for an area of planned regeneration and increased high density housing. Therefore 136 of the 150 properties (91%) are considered Negligible or Minor Adverse, when assessed against the Illustrative scheme. The remaining properties are discussed in more detail in Section 05 of this report.

1.7 Ultimately when comparing the performance of the two schemes, there are noticeably significant improvements against the Illustrative scheme. This is primarily due to the increased separation distances to the boundary neighbours, the reduction in height and massing and the allowances for gaps between blocks which allow for greater access to daylight and sunlight to the neighbouring properties.

1.8 In our capacity as daylight consultants on an extensive number of London developments, it is our considered view that from a daylighting and sunlight perspective the scheme performs well and is in keeping with the proposed densification and context of the Kingston area and the emerging policies on density and regeneration.

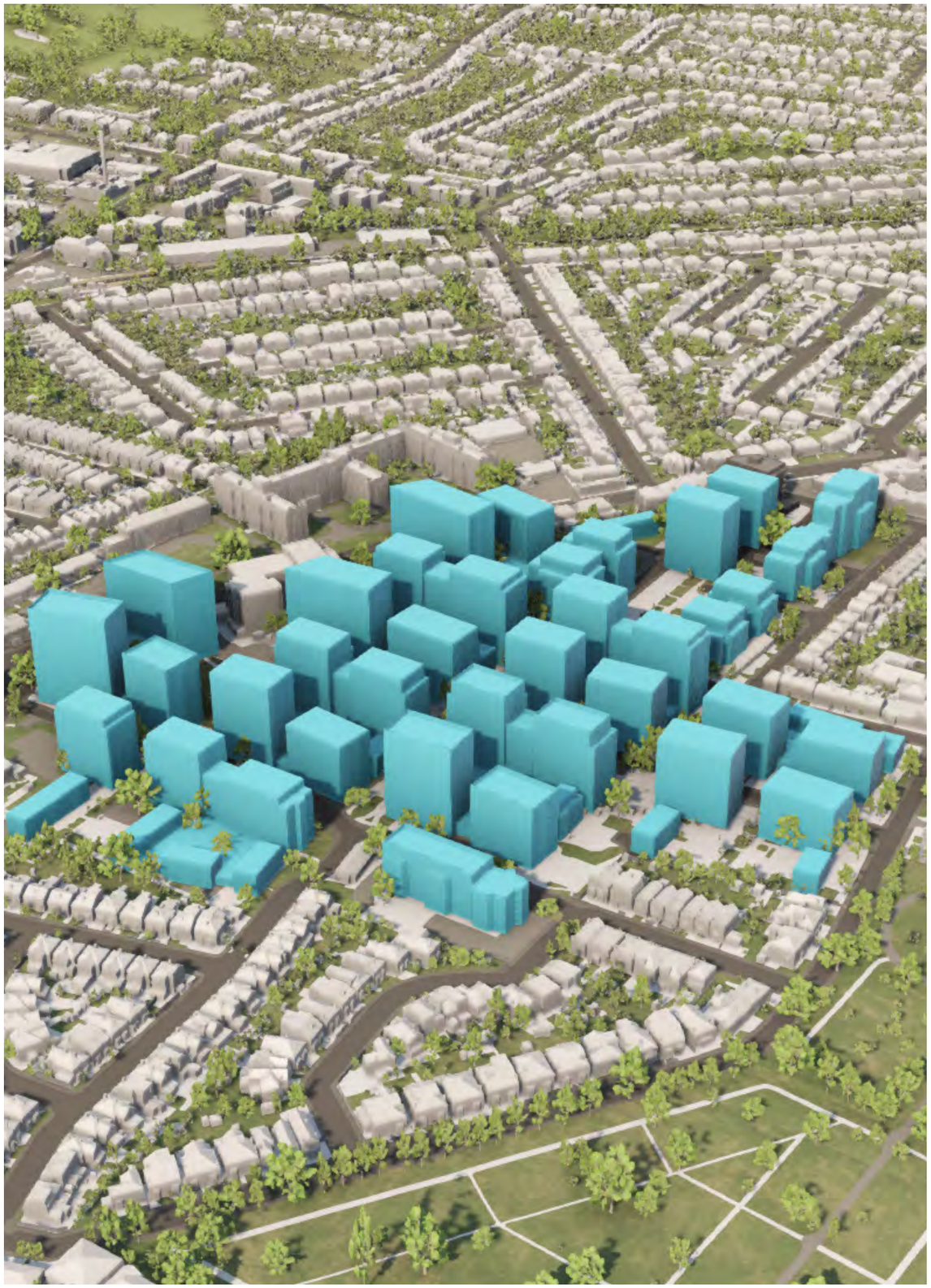

Figure 01: Illustration of the proposed Cambridge Road Estate development designed by Patel Taylor

# 2 THE SITE

GIA have been instructed to review and advise on the daylight and sunlight impacts associated with the implementation of the proposed Illustrative development at Cambridge Road Estate.

## THE SITE

2.1 The Site is located in the Royal Borough of Kingston upon Thames. The existing site contains a number of building types across the estate ranging from two storey houses to high rise 1960s apartment buildings. The use of the existing site is predominantly residential with some community and commercial spaces.

2.2 As can be seen in the image below, the borders of the estate are relatively low rise, specifically on the areas fronting Vincent Street, Cambridge Grove Road and to the rear of Piper Road.

2.3 The Site is earmarked in the Intend to Publish London Plan (Dec 2019) and the Kingston Core Strategy (April 2012) as an opportunity area for regeneration, intensification and high density housing.

2.4 Figure 02 below illustrates the Site. Further drawings are enclosed at Appendix 03 of this report.

## PROPOSED DEVELOPMENT - MAXIMUM PARAMETER SCHEME

2.5 The Development consists of a residential led mixed-use scheme, comprising the demolition of existing buildings on the Site and the construction of new residential units as well as commercial and community floorspace.

2.6 Phase 1 of the Development is in detail, whilst Phases 2 to 5 of the Development are in outline. As such, those elements proposed in detail are assessed for their fully articulated form and extents , whilst those elements proposed in outline are assessed as their Maximum Parameters portraying a worst-case scenario.

2.7 Therefore, the Development (as described) forms a worst case assessment basis of the daylight, sunlight and overshadowing assessment undertaken within the Chapter 9 of the ES chapter.

2.8 For those elements proposed in outline, future reserved matters applications (RMAs) would fall within the maximum parameter envelope and thus the effects in terms of daylight, sunlight and overshadowing would be no worse than those presented in the ES chapter. To present the scheme as what may come forward from the RMAs and to understand the more likely impact GIA have considered the Illustrative scheme as outlined on the next page. GIA's understanding of the Outline Development is illustrated in Figure 03 and further drawings are enclosed at Appendix 03.


Figure 02: 3D model of the site and Existing Property


Figure 03: 3D Perspective View of the Proposed Outline Hybrid Scheme

## PROPOSED DEVELOPMENT - ILLUSTRATIVE SCHEME

2.9 The Illustrative Development is not a fixed massing, however is an accurate example of what could be built out/frozen from the reserved matters applications if following the design codes applied for in the application.

2.10 The Illustrative scheme consists of a residential led mixed-use scheme, comprising the demolition of existing buildings on the Site and the construction of new residential units as well as commercial and community floorspace.

2.11 In comparison to the massing for the hybrid application, the Illustrative is significantly smaller in both height and mass and crucially is set back further away from the neighbouring properties.

2.12 The results discussed in this report are predicated on the Illustrative scheme to demonstrate that whilst this is not the scheme which is being submitted, the design codes which will be adhered to demonstrate that the future plans for the scheme will likely be a betterment to the neighbouring properties compared with the hybrid maximum massing application scheme.

2.13 GIA's understanding of the Illustrative Development is illustrated in Figure 04 and further drawings are enclosed at Appendix 03.


Figure 04: 3D Perspective View of the Proposed Illustrative Scheme

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# 3 POLICY & THE WIDER CONTEXT

3.1 Below we have detailed sections from the following documents as they are, in our opinion, the most pertinent in relation to daylight and sunlight matters and how we have approached the effects of the Proposed Development on the relevant neighbouring properties:

- National Planning Policy Framework (NPPF) (June 2019) (Ministry of Housing Communities and Local Government (MHCLG));
- National Planning Practice Guidance (NPPG) (updated October 2019) (MHCLG);
- Sustainable Design and Construction Supplementary Guidance (2014);
- Housing White Paper: Fixing Our Broken Housing Market (February 2017) – White Paper
- The London Plan – The Spatial Development Strategy for London Consolidated with Alterations Since 2011 (March 2016) (Greater London Authority) and The London Plan - Intend To Publish (Updated July 2019)
- Mayor of London's Housing Supplementary Planning Guidance (London Plan, March 2016) - Housing SPG
- Core Strategy - Local Development Framework - Royal Borough of Kingston Upon Thames (April 2012)
- Local Development Framework - Residential Design SPD (November 2013)

## NATIONAL PLANNING POLICY FRAMEWORK (JUNE 2019)

3.2 The NPPF (June 2019) states that local planning authorities should refuse applications which they consider fail to make efficient use of land. The discussion in relation to daylight and sunlight highlights the Government's recognition that increased flexibility is required in response to the requirement for higher density development.

> *"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)"*

3.3 The above demonstrates the Government's recognition that a flexible approach should be taken in relation to daylight and sunlight targets. As to achieve efficient use of land and maximise massing, impacts to existing neighbours daylight and sunlight amenity will likely occur.

## NATIONAL PLANNING PRACTICE GUIDANCE (UPDATED JULY 2019)

3.4 In light of the update to the Government's Planning Practice Guidance, we have considered the relevant paragraphs on daylight and sunlight.

3.5 Paragraph 6 of the NPPG (Ref ID: 66-006-20190722) acknowledges that new development may cause an impact on daylight and sunlight levels enjoyed by neighbouring occupiers. It requires local authorities to assess whether the impact to neighbouring occupiers would be "unreasonable".

## SUSTAINABLE DESIGN & CONSTRUCTION SUPPLEMENTARY PLANNING GUIDANCE (2014)

3.6 Section 2.3 of the SPG provides guidance on key areas such as site layout and micro-climate in relation to site layout and building design.

3.7 With regard to site layout, paragraph 2.3.6 refers to measures to reduce carbon dioxide emissions *"include enabling access to daylight and sunlight for uses that require [light]."* In addition, the guidance states that *"site planning can minimise the impact of the shadow created by the new buildings to protect existing features such as open space and renewable solar technologies on roofs."* It goes on to say that *"developers should ensure the layout of their site and buildings maximises the opportunities provided by natural systems, such as light."*

3.8 Paragraph 2.3.8 of the SPG continues with effects on the micro-climate caused by new buildings which include *"overshadowing and reducing access to sunlight."*

3.9 The guidance states that the above effects should *"be considered during the design of a development and assessed once the designed is finalised."*

## HOUSING WHITE PAPER: FIXING OUR BROKEN HOUSING MARKET (FEBRUARY 2017)

3.10 The DCLG (Department for Communities and Local Government), published a White Paper in February 2017. Although this is not yet policy it illustrates the direction of travel at Government level in relation to density and development.

3.11 The White Paper entitled *"Fixing our Broken Housing Market"* illustrates a clear direction to use land more efficiently for development. It outlines the need for flexibility in relation to the use and application of daylight and sunlight targets to support densification in urban areas like the location of the site.

3.12 Paragraph 1.51 and A.69 of the White Paper states that:

> *"1.51 Not all development makes good use of land, especially in areas where demand is high and available land is limited. London, for example, is a relatively low-density city especially in its suburbs. When people picture high-density housing, they tend to think of unattractive tower blocks, but some of the most desirable places to live in the capital are in areas of higher density mansion blocks, mews houses and terraced streets."*
>
> *"A69 Alongside this, the Government intends to amend national planning guidance to highlight planning approaches that can be used to help support higher densities, and to set out ways in which daylight considerations can be addressed in a pragmatic way that does not inhibit dense, high quality development."*

3.13 Paragraph 1.53 of the White Paper goes on to note that:

> *"To help ensure that effective use is made of land, and building on its previous consultations, the Government proposes to amend the National Planning Policy Framework to make it clear that plans and individual development proposals should:*
>
> - *make efficient use of land and avoid building homes at low densities where there is a shortage of land for meeting identified housing requirements;*
> - *address the particular scope for higher-density housing in urban locations that are well served by public transport (such as around many railway stations); that provide scope to replace or build over low-density uses (such as retail warehouses, lock-ups and car parks); or where buildings can be extended upwards by using the 'airspace' above them;*
> - *ensure that the density and form of development reflect the character, accessibility and infrastructure capacity of an area, and the nature of local housing needs; and*
> - *take a flexible approach in adopting and applying policy and guidance that could inhibit these objectives in particular circumstances; for example, avoiding a rigid application of open space standards if there is adequate provision in the wider area."*

3.14 The above illustrates that at national level the Government is addressing the need for flexibility in relation to daylight and sunlight targets. This is to support much needed densification of housing in urban areas.

## THE LONDON PLAN - THE SPATIAL DEVELOPMENT STRATEGY FOR LONDON CONSOLIDATED WITH ALTERATIONS SINCE 2011 (MARCH 2016) (GREATER LONDON AUTHORITY)

3.15 The London Plan was adopted in March 2016 and sets out the strategic plan for London providing a socio-economic, environmental and transport framework for a 20-25-year period.

3.16 Policy 7.6 of the London Plan states that buildings and structures should *"not cause unacceptable harm to the amenity of surrounding land and buildings, particularly residential buildings".*

## THE LONDON PLAN - INTEND TO PUBLISH (DECEMBER 2019)

3.17 The Examination in Public (EiP) on the London Plan was held between 15th January and 22nd May 2019. Subsequently, the panel of Inspectors,

appointed by the Secretary of State issued their report and recommendations to the Mayor on 8th October 2019. The Mayor has since considered the recommendations and has signified his intent to publish the London Plan. GIA understand that at this stage, the plan is treated as a material consideration in the determination of planning applications by the GLA.

3.18 The strategic 'Good Growth' policies set the tone for the London Plan aspirations. Policy GG2 'Making the Best Use of Land' promotes high-density, mixed-use places that make the best use of land and encourages the intensification 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."*

3.19 It further recommends application of:

> *"a design-led approach to determine the optimum development capacity of sites."*

3.20 At Policy D1A 'Infrastructure Requirements for Sustainable Densities', the Plan advises that to determine the optimal density of a site, consideration should be given to the site context; its connectivity and accessibility (including both PTAL and access to local services); and the capacity of surrounding infrastructure.

3.21 Under Policy D1B 'Optimising Site Capacity Through the Design-Led Approach', the plan states that development design should:

> *"enhance local context by delivering buildings and spaces that positively respond to local distinctiveness through their layouts, orientation, scale, appearance and shape, with due regard to existing and emerging street hierarchy, building types, forms and proportions."*

3.22 This supports a contextual approach to the design of new developments. In consideration of these policies, we believe it is important to consider the proposed amenity and potential benefits that the scheme offers to the local area as well as the site context when reviewing the impact on existing daylight and sunlight amenity.

3.23 The Plan also focuses on good building design with Section 3.1B.7 stating that;

> *"developments that show a clear understanding of, and relationship with, the distinctive features of a place are more likely to be successful. These features include buildings, structures, open spaces, public realm and the underlying landscape.*
>
> *Development should be designed to respond to the special characteristics of these features which can include: predominant architectural styles and/or building materials; architectural rhythm; distribution of building forms and heights; and heritage, architectural or cultural value."*

3.24 The London Plan is therefore clear that development should optimize density and should be considered alongside the site's context to make effective use of land.

3.25 Policy D4 'Housing quality and standards' paragraph F of the London Plan advises that:

> *"The design of development should provide sufficient daylight and sunlight to new and surrounding housing that is appropriate for its context."*

3.26 It is GIA's opinion that when reviewing daylight and sunlight impacts, consideration should be given to both the site's location and surrounding context as well as the guidance written in the NPPF and NPPG which refers to urban and suburban locations.

3.27 Within the Intend to Publish London Plan, the Cambridge Road Estate is noted as a citywide Opportunity Area (OA) where high density housing should be considered:

> *"2.1.24 The Royal Borough of Kingston upon Thames's network of town centres with their good levels of public transport accessibility have been identified as areas capable of accommodating development and intensification to provide leisure, cultural and night-time activity, commercial and retail uses, as well as high density housing. A Direction of Travel document was adopted in 2016 to guide planning policies in these areas. In particular it identified four areas where there is scope for significant change:*
>
> *• Kingston Town Centre*
>
> *• Norbiton, London Road and Cambridge Road Estate*
>
> *• New Malden*
>
> *• Tolworth*
>
> *2.1.25 These areas are capable of supporting some development in the short and medium term. However, once Crossrail 2 is operational, the borough will benefit from more Crossrail 2 stations than any other and the arrival of the new, higher frequency, higher capacity service will enable significant additional growth opportunities in these areas. It will improve Kingston's attractiveness as an office location and therefore support additional commercial growth in the town centre, building on links with Kingston University and Kingston College. The Local Plan and/or Planning Framework should set out how Crossrail 2 will support and deliver further growth and intensification in these areas."*

3.28 The Plan also indicated that the borough has a 10 year housing target of almost 10,000 additional new homes, of which the increase in Cambridge Road will allow for almost 10% of this in one development site.

## MAYOR OF LONDON'S HOUSING SUPPLEMENTARY PLANNING GUIDANCE (LONDON PLAN, MARCH 2016) – HOUSING SPG;

3.29 The Mayor of London published a Supplementary Planning Guidance on Housing in March 2016. As noted on www.london.gov.uk, the Housing SPG provides,

> *"guidance on a range of strategic policies including housing supply, residential density, housing standards, build to rent developments, student accommodation and viability appraisals."*

3.30 The Housing SPG moves away from the rigid application of the national numerical values provided in the BRE Guidelines and notes,

> *"1.3.45 an appropriate degree of flexibility needs to be applied when using BRE Guidelines to assess the daylight and sunlight impacts of new development on surrounding properties, as well as within new developments themselves. Guidelines should be applied sensitively to higher density development, especially in opportunity areas, town centres, large sites and accessible locations, where BRE advice suggests considering the use of alternative targets. This should take into account local circumstances; the need to optimise housing capacity; and scope for the character and form of an area to change over time."*

3.31 Spatial planning considers where such densification may be appropriate within London. It is generally accepted and agreed that it should be centered on transport nodes or as mentioned above 'accessible locations'. The development site is located in short walking distance to Norbiton and Kingston Stations and has a Transport for London (TfL) Public Transport Accessibility Level (PTAL) between 2-6a depending on where in the site you are. This is subject to change with the greater access routes which are planned to help walking through the Illustrative scheme, along with those discussed in the Intend to Publish.

3.32 The Housing SPG further advises,

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

3.33 This is a reasoned approach and there are many existing areas in London that do not achieve the national numerical values provided in the BRE Guidelines, but which provide successful living environments. The requirement in London for additional living spaces necessitates development at greater density.

3.34 The SPG also notes,

> *"2.3.47 BRE guidelines on assessing daylight and sunlight should be applied sensitively to higher density development in London, particularly in central and urban settings, recognising the London Plan's strategic approach to optimise housing output (Policy 3.4) and the need to accommodate additional housing supply in locations with good accessibility suitable for higher density development (Policy 3.3). Quantitative standards on daylight and sunlight should not be applied rigidly, without carefully considering the location and context and standards experienced in broadly comparable housing typologies in London."*

To summarise, the SPG:

- Calls for an appropriate degree of flexibility in the application of the BRE Guidelines to the particular circumstances of London;
- Recommends that the BRE Guidelines are applied sensitively to high density development, especially in areas such as town centres where alternative targets (from the normal standards) may be more appropriate;
- Suggests that the application of the BRE Guidelines needs to be consistent with optimising housing capacity and growth generally in recognition of the need for change in an area;
- Advises that comparisons should be made with the daylight and sunlight values achieved in comparable areas and typologies across London (rather than strictly with the national numerical values).

## CORE STRATEGY - LOCAL DEVELOPMENT FRAMEWORK - ROYAL BOROUGH KINGSTON UPON THAMES (APRIL 2012)

3.35 Policy DM 10 of the Design Requirements for New development states that proposals will be required to incorporate principles of good design. Development proposals should also:

> *"k. have regard to the amenities of occupants and neighbours, including in terms of privacy, outlook, sunlight/daylight, avoidance of visual intrusion and noise and disturbance"*

3.36 Policy CS 10 Housing Delivery identifies the Site as a regeneration area with scope for significant change and future housing growth.

3.37 Local Strategy for Delivery

3.38 Policy KT1 Kingston Town Neighbourhood identifies that although the majority of new housing is to be in Kingston Town Centre, the Council will also look at areas outside Kingston Town Centre and focus housing delivery in the Norbiton area and promote the regeneration of the Cambridge Road Estate

3.39 *"Even though Kingston Town Centre will be the focus for new housing in the Neighbourhood, opportunities to address deprivation in Norbiton will be achieved through the regeneration of the Cambridge Road Estate. The loss of existing family housing (often associated with their conversion for student accommodation) will be minimized as student accommodation requirements will be better integrated in the Neighbourhood."*

3.40 The Core Strategy for Kingston has earmarked the Cambridge Road site as an area in need of regeneration not only as a result for increased demand for housing, but also with regard to the greater improvement of health and well-being to existing residents. This site is the main area fro increased density within the Norbiton area of Kingston.

> *"2.12 The Borough has pockets of deprivation in Norbiton ward, focused on the Cambridge Estate, and in parts of Beverley ward in New Malden and Grove ward in Kingston. People living in the more deprived areas have a lower life expectancy than other more affluent parts of the Borough and this is a significant challenge that has been identified by the local strategic partners.*
>
> *"6.137 There are marked health inequalities and disparities in the Borough caused by socio-economic and lifestyle factors and these, together with demographic changes need to be addressed. Norbiton has the highest number of people dying under the age of 75 (mainly due to heart disease in the case of men and lung cancer for women) compared to Coombe Vale which has the lowest number. The Cambridge Road Estates in Norbiton ward lie in the top 10-20% category of the most deprived wards nationally where residents have a life expectancy that is around five years shorter than that for residents living in the most affluent areas in the Borough. Although the gap is low in comparison with other London health authorities, the existence of a gap in life expectancy in both males and females indicates that the disadvantaged communities of Kingston are experiencing health inequalities and this has a disproportionate impact upon the health outcomes of a condition."*

## LOCAL DEVELOPMENT FRAMEWORK, RESIDENTIAL DESIGN SPD (NOVEMBER 2013)

3.41 This SPD outlines that it is consistent with the key principles set out in Chapter 2 of the Mayor's Housing SPG. Policy Guidance 17 of this document references BRE Guidelines as an instrument of planning, includes a section in paragraph 3.66 on Daylighting and Sunlighting, stipulating that:

> *"The size and volume of any new build or extension may also be limited by the degree to which it would block out daylight to the habitable rooms of a neighbouring property. The need to maintain a reasonable outlook for neighbouring properties should also be carefully considered"*

## THE WIDER CONTEXT

3.42 Kingston borough is in the process of advancing a strategy for new housing and development within the borough. Whilst the majority of the existing built environment is based on low rise housing, due to the advancement in transport nodes being introduced in the future via Crossrail 2 there is a requirement for increased housing density to meet the demands these new transportation routes will open up. This is primarily focussed in the central Kingston area and whilst the Cambridge Road Estate site is not in this area, the level of increased housing density which is available and planned for in policy, GIA believe it should be viewed against the denser Kingston areas.

3.43 An increase in density such as this, as outlined in the aspirations of both the borough and the wider London Plan will result in daylight and sunlight alterations beyond the BRE Guidelines. It is important therefore to understand where similar development is planned, in central Kingston and compare the daylight levels there, with what daylight levels will be in the future for residents in and around the Cambridge Road Estate.

3.44 GIA have reviewed the following consented schemes in the area around Cambridge Road and Kingston centre to understand if any comparisons on the retained daylight levels to those which are discussed within this report. The sites reviewed are as follows:

- *65 Hampden Road - 19/00020/FUL*
- *Canbury Place Car Park - 19/02323/FUL*
- *Eden Walk - 15/13063/FUL*

3.45 These projects are discussed briefly individually overleaf:

## 65 HAMPDEN ROAD (19/00020/FUL)

3.46 This project is in close proximity to the development site and is for the demolition of existing industrial buildings and erection of replacement residential accommodation containing 79 flats, comprising of 1, 2, 3 and 4 bedroom units. In this project 14 neighbouring properties were assessed for daylight and sunlight. Against the proposed scheme the majority of the neighbouring properties will remain compliant to the BRE Guidelines for daylight and sunlight. Where there are impacts beyond guidance these are primarily minor and the majority of windows will retain levels in excess of 20% VSC however there are instances where 16% VSC is retained. With regard to daylight to the rooms, the majority of properties will meet the BRE criteria for NSL, however, there are two instances where losses to the NSL are in excess of 40% alteration and the retain level is below a 50% NSL which could be considered noticeable to the occupants. The discussions put forward by the consultant are that the impacts are to secondary rooms such as bedrooms and that the main living spaces will not be unduly impacted by the scheme.

3.47 In the decision notice there is no mention as to the impact of daylight and sunlight and it is likely considered that any impact to the neighbours has been weighed on the balance with the wider benefits and amenity of the proposed scheme.

## CANBURY PLACE CARPARK (19/02323/FUL)

3.48 The Canbury Place car park scheme is for a large development in central Kingston for a hybrid application for up to 445 residential dwellings. This development includes massing up to 25 storeys, however, planning is in for a revised scheme of 17 storeys which at the time of writing is being considered.

3.49 Against the proposed scheme, 26 properties have been assessed for daylight and sunlight. Against the proposed scheme, a number of properties will experience alterations in daylight which could be considered major adverse.

3.50 The consultant has reviewed the impact of the scheme in relation to daylight and sunlight firstly, however, has also considered that the retained daylight levels should be considered with a view to the contextual narrative of the emerging built environment of central Kingston.

3.51 Based on professional judgement of the consultant the criteria of significance to the neighbouring properties has been weighed primarily on the retained levels for both VSC and NSL and that a Minor adverse affect would be for a retained VSC of 15% and a retained NSL of 50%. Anything beyond, would be considered either Moderate or Major adverse.

3.52 With this view, whilst there are instances where single figure VSCs are recorded, it is deemed a retained VSC level of 15% has been considered acceptable for an area of increased density, when comparing with other local consented schemes and weighed on balance with the benefits which are being provided by the proposed scheme.

## EDEN WALK (15/13063/FUL)

3.53 The development at Eden Walk is for the demolition and redevelopment of Eden Walk Shopping Centre, including Millennium House and Neville House to provide a mixed use development consisting of retail units and kiosks, leisure including a cinema, media screens, offices and residential.

3.54 Against the proposed scheme 23 residential properties and one church were considered for assessment for daylight and sunlight. Eight of the properties met the BRE criteria for VSC and NSL. Of the remaining 16 properties, eight properties see a number of windows and rooms experience alterations in VSC and NSL in excess of 40% against a 20% BRE target and in some instances the retained VSC levels were below 15% VSC. The daylight and sunlight consultant reviewed the impacts to these properties against the retained daylight levels and commented that retained VSC levels in excess of 15% may be commensurate with an urban area. The retain levels of NSL discussed rooms which retain in excess of 50% could also be considered commensurate for the urban location of the site.

## THE WIDER CONTEXT SUMMARY

3.55 It is clear to see that the values of retained daylight levels in the neighbouring consented schemes differ substantially from that of a typical environment on which the BRE Guidelines are predicated, where a VSC of 27% or above tends to be more typical. Therefore, it seems appropriate to balance alterations in VSC which fall below guidance with the levels of sky visibility which exist within the local borough which are also considered opportunity areas, which have been built in a similar level of density or considered future density to the Proposed Development site.

# 4 BRE GUIDELINES & CONTEXT METHODOLOGY

The Building Research Establishment (BRE) have set out in their handbook *'Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice (2011)'*, guidelines and methodology for the measurement and assessment of daylight and sunlight.

## BUILDING RESEARCH ESTABLISHMENT GUIDELINES 2011

4.1 The BRE Guidelines note that the document is intended to be used in conjunction with the interior daylight recommendations found within the British Standard BS8206-2:2008 and The Applications Manual on Window Design of the Chartered Institution of Building Services Engineers (CIBSE).

4.2 The BRE Guidelines provides three methodologies for daylight assessment of neighbouring properties, namely;

1 The Vertical Sky Component (VSC);

2 The No Sky Line (NSL); and

3 The Average Daylight Factor (ADF).

4.3 For daylight to be compliant (in accordance with figure 20 of the Guide), both the VSC and NSL tests have to be met.

4.4 The BRE Guidelines suggest that the ADF assessment should only be used to *"check that adequate daylight is provided in new rooms"*, rather than existing buildings. As our assessments are on existing buildings we therefore have not considered the ADF within this report.

4.5 There is one methodology provided by the BRE Guidelines for sunlight assessment, denoted as Annual Probable Sunlight Hours (APSH).

4.6 It is an inevitable consequence of the built-up urban environment that daylight and sunlight will be more limited in dense urban areas. It is well acknowledged that in such situations there may be many planning and urban design matters to consider other than daylight and sunlight.

4.7 The BRE Guidelines provide alternative assessments to better understand the impact on a neighbouring property in such situations. The relevant assessments for the purpose of this report are detailed within the BRE Guidelines and summarised below.

4.8 The BRE Guidelines provide an alternative assessment where there are existing windows with balconies above them. This test determines whether it is the presence of the existing balcony that is the reason for the large relative impact on daylight (VSC).

4.9 The BRE Guide provides two methods of overshadowing assessment, the Sun Hours on Ground and Transient Overshadowing studies.

4.10 Appendix 02 of this report elaborates on the mechanics of each of the above assessment criteria, explains the appropriateness of their use and the parameters of each specific recommendation.

## CONTEXT METHODOLOGY

4.11 Due to the low rise nature of the existing site on the boundaries, coupled with the close proximity of the neighbouring properties, any meaningful massing in line with the demands and aspirations for an increase in housing density to satisfy the housing requirements for Kingston, should be considered against a wider contextual narrative.

4.12 Daylight and sunlight is only one element of the wider planning application and should be weighed against all aspects of amenity which is being introduced from the area regeneration.

4.13 This report serves to be a comparison of impact between the Max Parameter Scheme submitted for planning, but will never be built out fully. For the current worked example of the Illustrative scheme which is being assessed in this report, GIA have considered the following criteria to determine whether the impact to the neighbouring properties are Negligible, Minor Adverse, Moderate Adverse or Major Adverse.

4.14 If the property assessed meets the BRE criteria for assessment against all methodologies for daylight and sunlight, the property has been considered negligible.

4.15 If the property experiences alterations in daylight and sunlight yet meets the criteria outlined on the following page, GIA considered the impact to this property to be minor.

4.16 Where the loss of skylight or sunlight do not meet the guidelines in the BRE Guidelines, or the criteria outlined on the following page the impact is assessed as Moderate or Major Adverse.

4.17 To establish whether the change in daylight to a residence and/ or sensitive user constitutes a material nuisance, which could be negligible, minor, moderate or major we have considered the following:

- Retained VSC levels are equal to or greater than 15% (where windows are not self-obstructed in the baseline condition);
- All VSC and NSL alterations applicable to the room are no greater than 30% of their baseline values or, if not, the room's main window/s retain at least 15% VSC or at least half of the room area can still benefit from direct skylight at working plane height (NSL).

# 5 DAYLIGHT & SUNLIGHT IMPACTS TO NEIGHBOURING PROPERTIES

This section details the daylight and sunlight impacts from the Illustrative scheme in relation to the relevant properties neighbouring the Site.

5.1 A three-dimensional computer model of the Site and surrounding properties was produced to carry out the relevant technical studies. All relevant assumptions made in producing this model can be found in Appendix 01.

5.2 The assessments discussed in this report are to demonstrate a comparison between the maximum parameter scheme which is assessed for planning submission as part of the wider ES and the current Illustrative Scheme which is a hypothetical scenario of what may come forward for detailed planning in RMA.

5.3 The assessments discussed in this report therefore should serve as a more likely impact of the scheme which will come forward in the future albeit on the understanding that this is not what is being submitted for planning for this Hybrid application.

## SURROUNDING PROPERTIES - MAXIMUM PARAMETER RESULTS

5.4 GIA have identified 150 properties surrounding the site as relevant for daylight and sunlight assessment.

5.5 Against the Max Parameter Scheme discussed in Chapter 9 of the ES Chapter, the following 33 properties will meet the BRE criteria for daylight and sunlight (Negligible in the ES Chapter):

- 65 & 67 HAWKS ROAD;
- 69-69A HAWKS ROAD;
- 71-77 HAWKS ROAD (ODDS);
- 83-91 HAWKS ROAD (ODDS);
- 1 PORTMAN ROAD;
- 32-38 PIPER ROAD (EVENS);
- 5 PORTMAN ROAD;
- 136 GLOUCESTER ROAD;
- 59 CAMBRIDGE ROAD;
- 63 CAMBRIDGE ROAD;
- 61 CAMBRIDGE ROAD;
- 29 ROWLLS ROAD;
- 20-30 ROWLLS ROAD EVENS);
- 33 ROWLLS ROAD;
- 85 BONNER HILL ROAD;
- 22 HAMPDEN ROAD;

5.6 The following 43 properties experience a Minor Adverse impact (not significant):

- 79 & 81 HAWKS ROAD
- PYRAMID COURT 99 HAWKS ROAD
- 3 & 7 PORTMAN ROAD
- 40 PIPER ROAD
- 22-30 PIPER ROAD (evens)
- 1-4 SOMERSET ROAD
- THE LODGE 42 CAMBRIDGE ROAD
- 134 GLOUCESTER ROAD
- 57 CAMBRIDGE ROAD
- 27-37 CAMBRIDGE ROAD (odds)
- 13-17 PORTMAN ROAD (odds)
- 25, 27, 29 and 33 PORTMAN ROAD
- 39-47 PORTMAN ROAD (odds)
- 31 ROWLLS ROAD
- 87 BONNER HILL ROAD
- 89 BONNER HILL ROAD
- 15 PIPER ROAD
- 33 HAMPDEN ROAD
- 141 BONNER HILL ROAD
- 23 PIPER ROAD

5.7 Against the Max Parameter scheme in the ES Chapter, 33 properties are considered to experience a Moderate Adverse Affect (significant) and are listed below:

- 37 ROWLLS ROAD
- 35 & 37 PORTMAN ROAD
- 19-23 PORTMAN ROAD (odds)
- 9 & 11 PORTMAN ROAD
- 17-21 PIPER ROAD (odds)
- 18 & 20 VINCENT ROAD
- CAMBRIDGE GARDENS
- 64 & 66 VINCENT ROAD
- 31 PORTMAN ROAD
- 63-83 CAMBRIDGE GROVE ROAD (odds)
- 11 & 13 PIPER ROAD
- 25, 27 & 27A PIPER ROAD

5.8 The remaining 41 Properties are considered to experience a Major Adverse Affect (significant) in the ES Chapter:

- 61 CAMBRIDGE GROVE ROAD
- 2-16 VINCENT ROAD (evens)
- 22-62 VINCENT ROAD (evens)
- VIBE STUDENT LIVING 66-70 CAMBRIDGE ROAD
- CASCADIA HOUSE CAMBRIDGE ROAD
- 134-148 CAMBRIDGE ROAD
- 2 HAMPDEN ROAD

## SURROUNDING PROPERTIES - ILLUSTRATIVE SCHEME RESULTS

5.28 For this supplementary report GIA have considered the impact of the Illustrative scheme against the neighbouring properties to give an indication of the total impact of the future worked massing so that the neighbours are aware that their amenity is being considered by the design team with the adherence to the submitted design codes.

5.29 Against the Illustrative scheme the following 69 neighbouring properties will meet the BRE criteria for daylight and sunlight and are therefore considered negligible:

- 65-93 HAWKS ROAD (odds)
- 22-38 PIPER ROAD (evens)
- 1-27 PORTMAN ROAD (odds)
- 33, 35 & 39 PORTMAN ROAD
- 43-47 PORTMAN ROAD
- 134 & 136 GLOUCESTER ROAD
- 57-63 CAMBRIDGE ROAD (odds)
- 27 & 29 CAMBRIDGE ROAD
- 64 & 66 VINCENT ROAD
- 2, 3 & 4 SOMERSET ROAD
- 29 & 33 ROWLLS ROAD
- 20-30 ROWLLS ROAD (evens)
- 85 BONNER HILL ROAD
- 141 BONNER HILL ROAD
- 22 & 33HAMPDEN ROAD

5.30 Of the remaining 81 properties, based on the significance criteria outlined in Section 04 of this report, the following 67 properties will experience a Minor Adverse (not significant) impact against the Illustrative scheme:

- PYRAMID COURT 99 HAWKS ROAD
- 1 SOMERSET ROAD
- 29, 31, 37 & 41 PORTMAN ROAD
- 2-46 VINCENT ROAD (evens)
- 60 & 62 VINCENT ROAD
- THE LODGE 42 CAMBRIDGE ROAD
- CAMBRIDGE GARDENS
- 31-37 CAMBRIDGE ROAD (odds)
- 134-140 CAMBRIDGE ROAD (evens)
- 144-148 CAMBRIDGE ROAD (evens)
- 31 ROWLLS ROAD
- 63-83 CAMBRIDGE GROVE ROAD (odds)
- 87 & 89 BONNER HILL ROAD
- 15-27A PIPER ROAD (odds)
- 40 PIPER ROAD

5.31 Against the Illustrative scheme, the following 13 properties are considered to experience a Moderate Adverse Affect and are listed below:

- 48 VINCENT ROAD
- 50 VINCENT ROAD
- 52 VINCENT ROAD
- 54 VINCENT ROAD
- 58 VINCENT ROAD
- 11 PIPER ROAD
- 13 PIPER ROAD
- 2 HAMPDEN ROAD
- CASCADIA HOUSE CAMBRIDGE ROAD
- 142 CAMBRIDGE ROAD
- 37 ROWLLS ROAD
- 56 VINCENT ROAD
- 61 CAMBRIDGE GROVE ROAD

5.32 The one remaining property would still be considered Major Adverse against the Illustrative scheme, however this property is student accommodation and therefore it is arguable whether the impact should be viewed with the same sensitivity to residential properties:

- VIBE STUDENT LIVING 66-70 CAMBRIDGE ROAD

5.33 The impacts to the 14 properties which experience a significant impact are fully discussed in the following sections. All results can be found in Appendix 04.

5.34 To assist the readers understanding of the surrounding properties and window locations, we have produced window maps which are enclosed at Appendix 05 of this report.

## DISCUSSION OF RESULTS

**37 Rowlls Road**

5.9 37 Rowlls Road is located west of Phase 01 and currently overlooks the vacant car park connected to the Residents Association and Tadlow House. GIA have been unable to find floor plans for this property and therefore have adopted industry standard 4.3m depth for the room layouts on an assumed unknown use.

**Existing v Proposed Max Massing Hybrid Scheme**

**Daylight (VSC & NSL) and Sunlight (APSH)**

5.10 Against the Max massing Hybrid scheme the technical analysis demonstrates 3/10 rooms (30%) assessed will achieve BRE compliance in relation to both daylight methodologies (VSC and NSL).

5.11 Of the 11 windows assessed for VSC, 4 (36.4%) will comply with the numerical figures outlined in section 2.2.21 of the BRE Guidelines for VSC. The remaining 7 windows will experience BRE transgressions. Two of the windows experience minor alterations between 28.9%-29.4% against a BRE target of 20%. The remaining five windows see transgressions between 33.2%-37.7% which is considered moderate.

5.12 Six of the seven affected windows will retain VSC levels in excess of 17.2% which is considered acceptable given the regeneration aspects of the area. The one remaining window will retain 14.6% which is marginally below a mid-teens VSC.

5.13 Whilst we do not have floor plans we have undertaken NSL assessment on an assumed basis. In terms of NSL, three of the 10 (30%) rooms assessed would meet BRE's criteria and are therefore considered to experience a Negligible effect.

5.14 Of the seven affected rooms, one would experience an alteration in NSL of 35.3% which is considered a Moderate Adverse effect whilst six would experience an alteration between 47.5% and 65.4% which is considered a Major Adverse effect. One of the affected rooms will retain in excess of 60% which is considered acceptable given the regeneration of the area. The remaining rooms will retain below 50% NSL.

5.15 In relation to sunlight, all rooms will meet the BRE criteria for sunlight APSH targets.

**Existing v Proposed - Illustrative Scheme**

**Daylight (VSC & NSL) and Sunlight (APSH)**

5.16 As this property is located opposite Phase 01 of the Hybrid Scheme and in detail as opposed to max massing, the results are similar in both assessments. Against the Illustrative scheme the technical analysis demonstrates 3/10 rooms will achieve BRE compliance in relation to both VSC and NSL.

5.17 Of the 11 windows assessed for VSC, 4 (36.4%) will comply with the numerical figures outlined in section 2.2.21 of the BRE Guidelines for VSC. The remaining 7 windows will experience BRE transgressions. Two of the windows experience minor alterations between 25.2%-28.7% against a BRE target of 20%. The remaining five windows see transgressions between 30.6%-35.7% which is considered moderate.

5.18 Due to the unobstructed view over the car park in the existing condition, the daylight to these windows is considered high for an urban area such as this and it is imprtant to consider what the retained daylight levels will be in order to meet the local borough's strategy for increased density and regeneration of the Cambridge Road Estate.

5.19 In considering the retained VSC, six of the seven affected windows will retain VSC levels in excess of 18.1% which is considered acceptable given the regeneration aspects of the area. The one remaining window will retain 14.8% which is marginally below a mid-teens VSC.

5.20 In terms of NSL, three of the 10 (30%) rooms assessed would meet BRE's criteria and are therefore considered to experience a Negligible effect.

5.21 Of the seven affected rooms, one would experience an alteration in NSL of 35.3% which is considered a Moderate Adverse effect whilst six would experience an alteration between 47.4%-65.4% which is considered a Major Adverse effect. One of the affected rooms will retain in excess of 60% which is considered acceptable given the regeneration of the area. Three rooms will retain 43.1%-48.2% which is marginally below a 50% level. The remaining three rooms will retain below 50% NSL.

5.22 One of these rooms (F00/R4) is likely to serve the entrance space for the house as the windows form

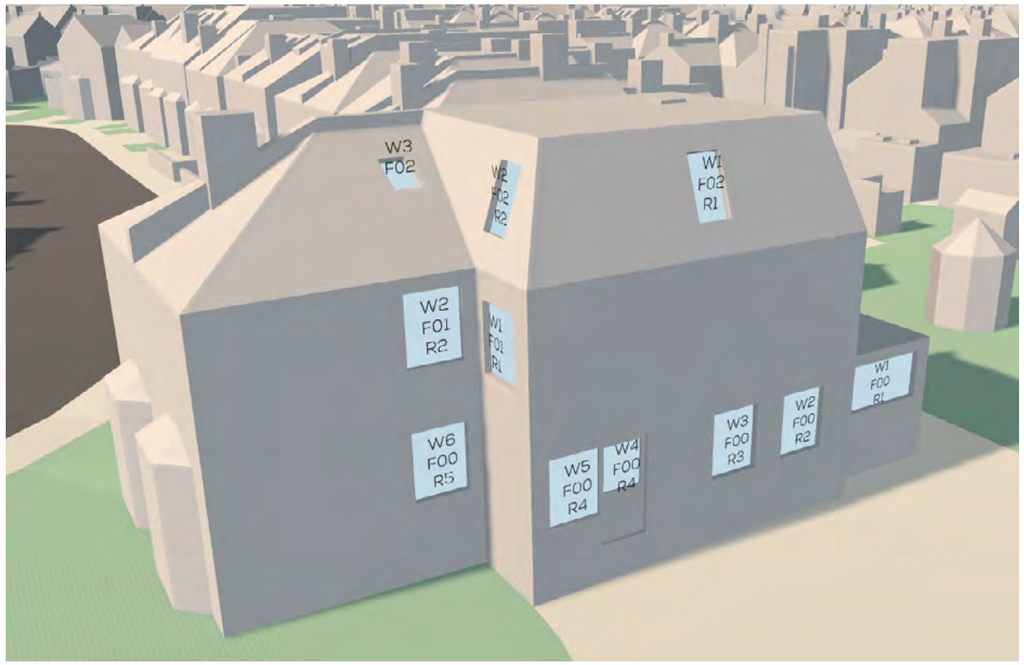


Figure 05: Window Maps of Cambridge Road Estate

part of a door, therefore it is likely they do not serve a habitable space and therefore would not be relevant for assessment.

5.23 In addition to this F00/R1 appears to serve a garden room/conservatory and is likely to have mitigating windows facing away from the site. This could not be confirmed from site visit due to access but GIA believe this is likely and would allow for access to light away from the development site.

5.24 In relation to sunlight, all rooms will meet the BRE criteria for sunlight APSH targets.

**Conclusion**

5.25 In the ES Chapter, this property was considered a Moderate Adverse affect. Due to the location opposite Phase 01 of the scheme which is a frozen massing and part of the detailed design, the results between the Illustrative scheme would be similar and therefore would still be considered Moderate Adverse. However, there are improvements against the Illustrative scheme.

5.26 The impacts to 37 Rowlls Road have been considered by reference to relevant policy, contextual considerations and local factors (see Section 04). If the scheme is to make effective use of land as per the White Paper and recent NPPF and NPPG (see Section 03) BRE transgressions will occur at neighbouring properties.

5.27 In the context of the need for housing and greater density in London, it is our opinion that although there are daylight and sunlight alterations in breach of the BRE Guidelines, these are appropriate given the site context, its location within the Kingston Opportunity Area of the Cambridge Road Estate and an area which is considered both locally and London wide as subject to regeneration and high density housing.

**48 Vincent Road**

5.35 48 Vincent Road is located south of the development site and currently overlooks the garden area of Childerly tower block. GIA have been unable to find floor plans for this property and therefore have adopted industry standard 4.3m depth for the room layouts on an assumed unknown use.

**Existing v Proposed Max Massing Hybrid Scheme**

**Daylight (VSC & NSL) and Sunlight (APSH)**

5.36 Against the Max massing Hybrid scheme the technical analysis demonstrates 0 rooms (0%) assessed will achieve BRE compliance in relation to both daylight methodologies (VSC and NSL).

5.37 Of the 5 windows assessed for VSC, 0 (0%) will comply with the numerical figures outlined in section 2.2.21 of the BRE Guidelines for VSC. One of the windows experiences a moderate alteration of 37.1%. The remaining 4 windows see transgressions between 65.5%-69.3% which is considered major adverse.

5.38 None of the windows will retain VSC levels in excess of a mid-teens level and therefore the impact will be noticeable to the occupants.

5.39 Whilst we do not have floor plans we have undertaken NSL assessment on an assumed basis. In terms of NSL, one of the three (33.3%) rooms assessed would meet BRE's criteria and are therefore considered to experience a Negligible effect.

5.40 Of the two affected rooms, both will experience an alteration of 78.9% and 76.8% which is considered a Major Adverse effect. Neither room will retain in excess of 50% which and therefore will likely be noticeable to the occupants.

5.41 The property is north facing and therefore not relevant for sunlight assessment.

**Existing v Proposed - Illustrative Scheme**

**Daylight (VSC & NSL) and Sunlight (APSH)**

5.42 Compared with the massing of the Max Parameter scheme the Illustrative massing is smaller in height and bulk in this portion of the site facing Vincent Road. Against the Illustrative scheme the technical analysis demonstrates 0 rooms will achieve BRE compliance in relation to both VSC and NSL.

5.43 Of the 5 windows assessed for VSC, 1 (20%) will comply with the numerical figures outlined in section 2.2.21 of the BRE Guidelines for VSC. One of the windows experiences a minor alteration of 27.8% against a 20% BRE target. The remaining 3 windows experience moderate alterations between 31%-33.1%.

5.44 In considering the retained VSC, all affected windows will retain VSC levels in excess of 16.7% which is considered acceptable given the regeneration and planned increased density of the area.

5.45 In terms of NSL, one of the 3 (33.3%) rooms assessed would meet BRE's criteria and are therefore considered to experience a Negligible effect.

5.46 The two remaining rooms will experience alterations of 41.6% & 47.7% which is considered Major adverse. One room will retain in excess of 50%.

5.47 As GIA have not been able to sourced floor plans for this property, we have included the ground floor (F00/R1) room for assessment. However, from site photos it appears that the three windows of this room serve a porch. GIA would therefore assume that this room does not serve a habitable room but an entrance hall/ circulation space, which would not normally be required for assessment for planning.

5.48 The property is north facing and therefore not relevant for sunlight assessment.


Figure 06: Window Maps of Cambridge Road Estate

**Conclusion**

5.49 In the ES Chapter, this property was considered a Major Adverse affect. Due to the location opposite a large continuous massing of the Max parameter scheme this is not surprising. However, the proposed Illustrative scheme massing is pushed away from the receptors within 48 Vincent Road.

5.50 Therefore against the Illustrative scheme, we would consider that the impact to the property is Moderate adverse due to some percentage alterations being considered Major, however, given the acceptable retained daylight levels for an area where planned high density housing is considered in the near future, the level of impact is much less than the Max Parameter scheme.

5.51 The impacts to 48 Vincent Road have been considered by reference to relevant policy, contextual considerations and local factors (see Section 04). If the scheme is to make effective use of land as per the White Paper and recent NPPF and NPPG (see Section 03) BRE transgressions will occur at neighbouring properties.

5.52 In the context of the need for housing and greater density in London, it is our opinion that although there are daylight alterations in breach of the BRE Guidelines, these are appropriate given the site context, its location within the Kingston Opportunity Area of the Cambridge Road Estate and an area which is considered both locally and in the London Plan as subject to regeneration and high density housing.

**52 Vincent Road**

5.53 52 Vincent Road is located south of the development site and currently overlooks the garden area of Childerly tower block. GIA have been able to source floor plans for this property from online sales archives and have therefore update our 3D model to reflect these layouts.

**Existing v Proposed Max Massing Hybrid Scheme**

**Daylight (VSC & NSL) and Sunlight (APSH)**

5.54 Against the Max massing Hybrid scheme the technical analysis demonstrates 0 rooms (0%) assessed will achieve BRE compliance in relation to both daylight methodologies (VSC and NSL).

5.55 Of the 2 windows assessed for VSC, 0 (0%) will comply with the numerical figures outlined in section 2.2.21 of the BRE Guidelines for VSC. The 2 windows see transgressions between 64.7%-65.8% which is considered major adverse.

5.56 None of the windows will retain VSC levels in excess of a mid-teens level and therefore the impact will be noticeable to the occupants.

5.57 In terms of NSL, none of the two (0%) rooms assessed would meet BRE's criteria. The two affected rooms, will experience alteration between 76.9% & 80% which is considered a Major Adverse effect. None of the rooms will retain in excess of 50% which and therefore will likely be noticeable to the occupants.

5.58 The property is north facing and therefore not relevant for sunlight assessment.

**Existing v Proposed - Illustrative Scheme**

**Daylight (VSC & NSL) and Sunlight (APSH)**

Compared with the massing of the Max Parameter scheme the Illustrative massing is smaller in height and bulk in this portion of the site facing Vincent Road. Against the Illustrative scheme the technical analysis demonstrates 0 rooms will achieve BRE compliance in relation to both VSC and NSL.

5.59 Of the 2 windows assessed for VSC, 0 (0%) will comply with the BRE Guidelines for VSC. 2 of the windows experience minor alterations of 26.8% & 29.8% against a 20% BRE target. In considering the retained VSC, all affected windows will retain VSC levels in excess of 15.8% which is considered acceptable given the regeneration and planned increased density of the area.

5.60 In terms of NSL, none of the two (0%) rooms assessed would meet BRE's criteria.

5.61 The two remaining rooms will experience alterations of 45.4% & 50.5% which is considered Major adverse. The rooms will retain 42.6% and 47.8% which is marginally below 50% sky visibility.

5.62 As GIA have been able to sourced floor plans for this property, we have excluded the ground floor porch as this room does not serve a habitable room but an entrance hall/ circulation space, which is not required for assessment for planning. It is understood that room F01/R1 on the first floor level serves a bedroom. The BRE Guidelines outline in section 2.2.8 that bedrooms carry less significance in daylighting terms than main habitable rooms, such as living rooms.

5.63 The property is north facing and therefore not relevant for sunlight assessment.

5.64 **Conclusion**

5.65 In the ES Chapter, this property was considered a Major Adverse affect. Due to the location opposite a large continuous massing of the Max parameter scheme this is not surprising. However, the proposed Illustrative scheme massing is pushed away from the receptors within 52 Vincent Road.

5.66 Against the Illustrative scheme, GIA would consider that the impact to the property is Moderate adverse due to some percentage alterations being considered Major, however, given the acceptable retained daylight levels for an area where planned high density housing is considered in the near future, the level of impact is much less than the Max Parameter scheme.


Figure 07: Window Maps of Cambridge Road Estate

5.67 The impacts to 52 Vincent Road have been considered by reference to relevant policy, contextual considerations and local factors (see Section 04). If the scheme is to make effective use of land as per the White Paper and recent NPPF and NPPG (see Section 03) BRE transgressions will occur at neighbouring properties.

5.68 In the context of the need for housing and greater density in London, it is our opinion that although there are daylight alterations in breach of the BRE Guidelines, these are appropriate given the site context, its location within the Kingston Opportunity Area of the Cambridge Road Estate and an area which is considered both locally and in the London Plan as subject to regeneration and high density housing.

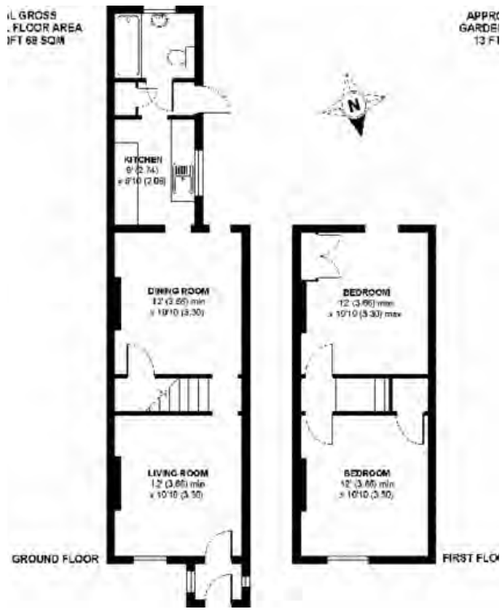


Figure 08: Floor plan

**50 Vincent Road**

5.69 50 Vincent Road is located south of the development site and currently overlooks the garden area of Childerly tower block. GIA have been able to source floor plans for this property from online sales archives and have therefore update our 3D model to reflect these layouts.

5.70 **Existing v Proposed Max Massing Hybrid Scheme**

**Daylight (VSC & NSL) and Sunlight (APSH)**

5.71 Against the Max massing Hybrid scheme the technical analysis demonstrates 0 rooms (0%) assessed will achieve BRE compliance in relation to both daylight methodologies (VSC and NSL).

5.72 Of the 4 windows assessed for VSC, 0 (0%) will comply with the numerical figures outlined in section 2.2.21 of the BRE Guidelines for VSC. The 4 windows see transgressions between 65.7%-71.1% which is considered major adverse.

5.73 None of the windows will retain VSC levels in excess of a mid-teens level and therefore the impact will be noticeable to the occupants.

5.74 In terms of NSL, none of the two (0%) rooms assessed would meet BRE's criteria. The two affected rooms, will experience alteration between 75.8% & 76.7% which is considered a Major Adverse effect. The rooms will retain NSL levels of 21.4% & 23.3% which will likely be noticeable to the occupants.

5.75 The property is north facing and therefore not relevant for sunlight assessment.

**Existing v Proposed - Illustrative Scheme**

**Daylight (VSC & NSL) and Sunlight (APSH)**

5.76 Compared with the massing of the Max Parameter scheme the Illustrative massing is smaller in height and bulk in this portion of the site facing Vincent Road. Against the Illustrative scheme the technical analysis demonstrates 0 rooms will achieve BRE compliance in relation to both VSC and NSL.

5.77 Of the 4 windows assessed for VSC, 0 (0%) will comply with the BRE Guidelines for VSC. One of the windows will experience a minor alteration of 27.3%

The remaining three windows experience moderate alterations between 30.7%-32.2%.

5.78 In considering the retained VSC, three of the four affected windows will retain VSC levels in excess of 17.3% which is considered acceptable given the regeneration and planned increased density of the area. The one remaining window will retain 14.9% VSC which is marginally below a mid-teens level. This window (W2/F00), is located adjacent to the porch of 52 Vincent Road which will likely obstruct light coming from oblique angles.

5.79 In terms of NSL, none of the 2 (0%) rooms assessed would meet BRE's criteria. The two remaining rooms will experience alterations of 35.8% & 39.1% which is considered Moderate adverse. The rooms will both retain in excess of 56% NSL which is considered acceptable for an area of planned increased density and regeneration.

5.80 As GIA have been able to sourced floor plans for this property it is understood that room F01/R1 on the first floor level serves a bedroom. The BRE Guidelines outline in section 2.2.8 that bedrooms carry less significance in daylighting terms than main habitable rooms, such as living rooms. .

5.81 The property is north facing and therefore not relevant for sunlight assessment.

5.82 **Conclusion**

5.83 In the ES Chapter, this property was considered a Major Adverse affect. Due to the location opposite a large continuous massing of the Max parameter scheme this is not surprising. However, the proposed Illustrative scheme massing is pushed away from the receptors within 50 Vincent Road.

5.84 Against the Illustrative scheme, GIA would consider that the impact to the property is Moderate adverse due to some percentage alterations being considered Major, however, given the acceptable retained daylight levels for both VSC and NSL in an area where planned high density housing is considered in the near future, the level of impact is much less than the Max Parameter scheme.


Figure 09: Window Maps of Cambridge Road Estate

5.85 The impacts to 50 Vincent Road have been considered by reference to relevant policy, contextual considerations and local factors (see Section 04). If the scheme is to make effective use of land as per the White Paper and recent NPPF and NPPG (see Section 03) BRE transgressions will occur at neighbouring properties.

5.86 In the context of the need for housing and greater density in London, it is our opinion that although there are daylight alterations in breach of the BRE Guidelines, these are appropriate given the site context, its location within the Kingston Opportunity Area of the Cambridge Road Estate and an area which is considered both locally and in the London Plan as subject to regeneration and high density housing.


Figure 10: Floor plan

**54 Vincent Road**

5.87 54 Vincent Road is located south of the development site and currently overlooks the garden area of Childerly tower block. GIA have been able to source floor plans for this property from online sales archives and have therefore update our 3D model to reflect these layouts.

**Existing v Proposed Max Massing Hybrid Scheme**

**Daylight (VSC & NSL) and Sunlight (APSH)**

5.88 Against the Max massing Hybrid scheme the technical analysis demonstrates 0 rooms (0%) assessed will achieve BRE compliance in relation to both daylight methodologies (VSC and NSL).

5.89 Of the three windows assessed for VSC, 0 (0%) will comply with the numerical figures outlined in section 2.2.21 of the BRE Guidelines for VSC. The 3 windows see transgressions between 63%-65.6% which is considered major adverse.

5.90 None of the windows will retain VSC levels in excess of a mid-teens level and therefore the impact will be noticeable to the occupants.

5.91 In terms of NSL, none of the two (0%) rooms assessed would meet BRE's criteria. The two affected rooms, will experience alteration between 70.5% & 78.1% which is considered a Major Adverse effect. The rooms will retain NSL levels of 21.7% & 23.8% which will likely be noticeable to the occupants.

5.92 The property is north facing and therefore not relevant for sunlight assessment.

**Existing v Proposed - Illustrative Scheme**

**Daylight (VSC & NSL) and Sunlight (APSH)**

5.93 Compared with the massing of the Max Parameter scheme the Illustrative massing is smaller in height and bulk in this portion of the site facing Vincent Road. Against the Illustrative scheme the technical analysis demonstrates 0 rooms will achieve BRE compliance in relation to both VSC and NSL.

5.94 Of the 4 windows assessed for VSC, 0 (0%) will comply with the BRE Guidelines for VSC. All three windows will experience minor alterations between 25.6%-29.1%.

5.95 In considering the retained VSC, all three windows will retain VSC levels in excess of 20.2% which is considered acceptable given the regeneration and planned increased density of the area.

5.96 In terms of NSL, none of the 2 (0%) rooms assessed would meet BRE's criteria. The two remaining rooms will experience alterations of 41% & 48.2% which is considered Moderate adverse. One room will retain in excess of 50% NSL which is considered acceptable for an area of planned increased density and regeneration. The remaining rooms will retain 47.6% which is marginally below a 50% level.

5.97 As GIA have been able to sourced floor plans for this property it is understood that room F01/R1 on the first floor level serves a bedroom. The BRE Guidelines outline in section 2.2.8 that bedrooms carry less significance in daylighting terms than main habitable rooms, such as living rooms. .

5.98 The property is north facing and therefore not relevant for sunlight assessment.

5.99 **Conclusion**

5.100 In the ES Chapter, this property was considered a Major Adverse affect. Due to the location opposite a large continuous massing of the Max parameter scheme this is not surprising. However, the proposed Illustrative scheme massing is pushed away from the receptors within 54 Vincent Road.

5.101 Against the Illustrative scheme, GIA would consider that the impact to the property is Moderate adverse due to some percentage alterations still being considered Major, however, given the acceptable retained daylight levels for both VSC and NSL in an area where planned high density housing is considered in the near future the level of impact is much less than the Max Parameter scheme.

5.102 The impacts to 54 Vincent Road have been considered by reference to relevant policy, contextual considerations and local factors (see Section 04). If the scheme is to make effective use of land as per the White Paper and recent NPPF and NPPG (see Section 03) BRE transgressions will occur at neighbouring properties.

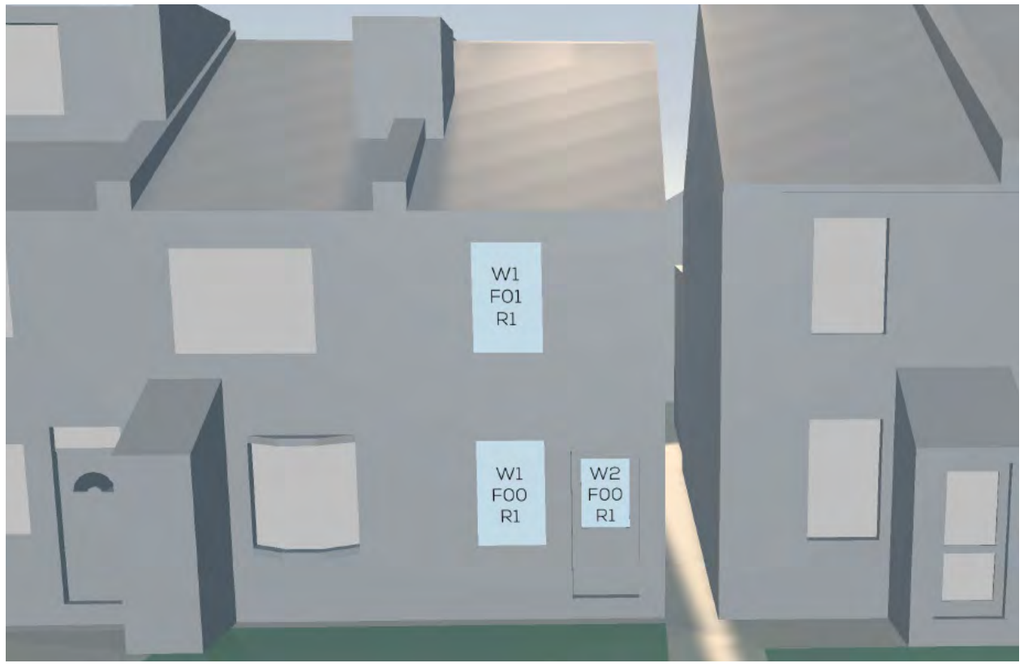


Figure 11: Window Maps of Cambridge Road Estate

5.103 In the context of the need for housing and greater density in London, it is our opinion that although there are daylight alterations in breach of the BRE Guidelines, these are appropriate given the site context, its location within the Kingston Opportunity Area of the Cambridge Road Estate and an area which is considered both locally and in the London Plan as subject to regeneration and high density housing.


Figure 12: Floor plan

**56 Vincent Road**

5.104 56 Vincent Road is located south of the development site and currently overlooks the garden area of Childerly tower block. GIA have been unable to find floor plans for this property and therefore have adopted industry standard 4.3m depth for the room layouts on an assumed unknown use.

**Existing v Proposed Max Massing Hybrid Scheme**

**Daylight (VSC & NSL) and Sunlight (APSH)**

5.105 Against the Max massing Hybrid scheme the technical analysis demonstrates 0 rooms (0%) assessed will achieve BRE compliance in relation to both daylight methodologies (VSC and NSL).

5.106 Of the 4 windows assessed for VSC, 0 (0%) will comply with the numerical figures outlined in section 2.2.21 of the BRE Guidelines for VSC. The 4 windows see transgressions between 62.1%-72.9% which is considered major adverse.

5.107 None of the windows will retain VSC levels in excess of a mid-teens level and therefore the impact will be noticeable to the occupants.

5.108 Whilst we do not have floor plans we have undertaken NSL assessment on an assumed basis. In terms of NSL, none of the three (0%) rooms assessed would meet BRE's criteria. The two rooms, both will experience an alteration of 59.4% and 82.2% which is considered a Major Adverse effect. Neither room will retain in excess of 50% which and therefore will likely be noticeable to the occupants.

5.109 The property is north facing and therefore not relevant for sunlight assessment.

**Existing v Proposed - Illustrative Scheme**

**Daylight (VSC & NSL)and Sunlight (APSH)**

5.110 Compared with the massing of the Max Parameter scheme the Illustrative massing is smaller in height and bulk in this portion of the site and is set back further from Vincent Road. Against the Illustrative scheme the technical analysis demonstrates 0 rooms will achieve BRE compliance in relation to both VSC and NSL.

5.111 Of the 4 windows assessed for VSC, 0 (0%) will comply with the BRE Guidelines for VSC. Two of the four windows will experience minor alterations of 24.5% & 29%. The two remaining windows will experience moderate alterations of 31.5% & 37.2%.

5.112 In considering the retained VSC, three of the four windows will retain VSC levels in excess of 17.6% which is considered acceptable given the regeneration and planned increased density of the area. The one remaining window (W3/F00) has an existing VSC below 15% and therefore a mid-teens level would never be achievable. This window also forms part of a bay window in which the two other windows of the bay will retain in excess of a 15% VSC.

5.113 In terms of NSL, one of the 2 (50%) rooms assessed would meet BRE's criteria. The remaining room will experience an alteration of 52.5% which is considered Major adverse. The room will retain 45.6% which is marginally below a 50% level.

5.114 The property is north facing and therefore not relevant for sunlight assessment.

5.115 **Conclusion**

5.116 In the ES Chapter, this property was considered a Major Adverse affect. Due to the location opposite a large continuous massing of the Max parameter scheme this is not surprising. However, the proposed Illustrative scheme massing is pushed away from the receptors within 56 Vincent Road.

5.117 Against the Illustrative scheme, GIA would consider that the impact to the property is Moderate adverse, given the acceptable retained daylight levels for VSC and the significantly improved NSL results compared with the Max Parameter scheme.

5.118 The impacts to 56 Vincent Road have been considered by reference to relevant policy, contextual considerations and local factors (see Section 04). If the scheme is to make effective use of land as per the White Paper and recent NPPF and NPPG (see Section 03) BRE transgressions will occur at neighbouring properties.

5.119 In the context of the need for housing and greater density in London, it is our opinion that although there are daylight alterations in breach of the BRE Guidelines, these are appropriate given the site context and designated opportunity area.


Figure 13: Window Maps of Cambridge Road Estate

**58 Vincent Road**

5.120 58 Vincent Road is located south of the development site and currently overlooks the garden area of Childerly tower block. GIA have been able to source floor plans for this property from online sales archives and have therefore update our 3D model to reflect these layouts. From these it is understood that only the ground windows serve habitable spaces the three other windows in this property serve circulation and a bathroom.

5.121 The living room is located on the ground floor and from the floor plans appears to be one large open plan room with one window facing the site and another window facing south onto the property's garden. As this room is therefore over 7m in length, to present a worst-case scenario, we have halved this room to only assess the impact to the site facing window and room.

**Existing v Proposed Max Massing Hybrid Scheme**

**Daylight (VSC & NSL) and Sunlight (APSH)**

5.122 Against the Max massing Hybrid scheme the technical analysis demonstrates the room assessed will not achieve BRE compliance in relation to both daylight methodologies (VSC and NSL).

5.123 The window assessed will see a VSC transgression of 62.2% which is considered major adverse. The window will retain 10.9% VSC which will likely be noticeable to the occupants.

5.124 In terms of NSL, the living room will experience an alteration of 79.8% which is considered a Major Adverse effect. The room will retain 18.4% and therefore will likely be noticeable to the occupants.

5.125 The property is north facing and therefore not relevant for sunlight assessment.

**Existing v Proposed - Illustrative Scheme**

**Daylight (VSC & NSL)and Sunlight (APSH)**

5.126 Compared with the massing of the Max Parameter scheme the Illustrative massing is smaller in height and bulk in this portion of the site and is set back further from Vincent Road. Against the Illustrative scheme the technical analysis demonstrates the room will not achieve BRE compliance in relation to both VSC and NSL.

5.127 Against the Illustrative, the window will experience a minor VSC alteration of 25.7%.

5.128 In considering the retained VSC, the window will retain VSC levels in excess of 21.4% which is considered acceptable given the regeneration and planned increased density of the area.

5.129 In terms of NSL, the room will experience an alteration of 52.9% which is considered Major adverse. The room will retain 43% which is marginally below a 50% level. It is important to note that as we have reduced the room size for a worst case scenario, in reality the living room will enjoy mitigating light from the south facing window to the rear of the property.

5.130 The property is north facing and therefore not relevant for sunlight assessment.

5.131 **Conclusion**

5.132 In the ES Chapter, this property was considered a Major Adverse affect. Due to the location opposite a large continuous massing of the Max parameter scheme this is not surprising. However, the proposed Illustrative scheme massing is pushed away from the receptors of 58 Vincent Road.

5.133 Against the Illustrative scheme, GIA would consider that the impact to the property is Moderate adverse due to the NSL percentage alteration still being considered Major, however, given the minor VSC impact the level of impact is much less than the Max Parameter scheme.

5.134 The impacts to 58 Vincent Road have been considered by reference to relevant policy, contextual considerations and local factors (see Section 04). If the scheme is to make effective use of land as per the White Paper and recent NPPF and NPPG (see Section 03) BRE transgressions will occur at neighbouring properties.

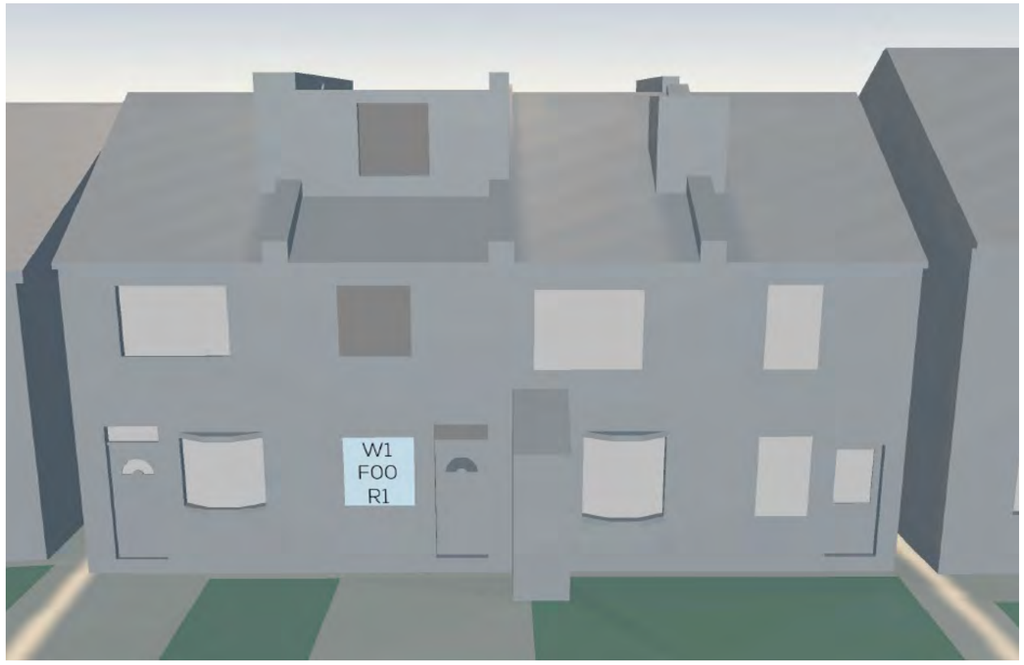


Figure 14: Window Maps of Cambridge Road Estate

5.135 In the context of the need for housing and greater density in London, it is our opinion that although there are daylight alterations in breach of the BRE Guidelines, these are appropriate given the site context, its location within the Kingston Opportunity Area of the Cambridge Road Estate and an area which is considered both locally and in the London Plan as subject to regeneration and high density housing.

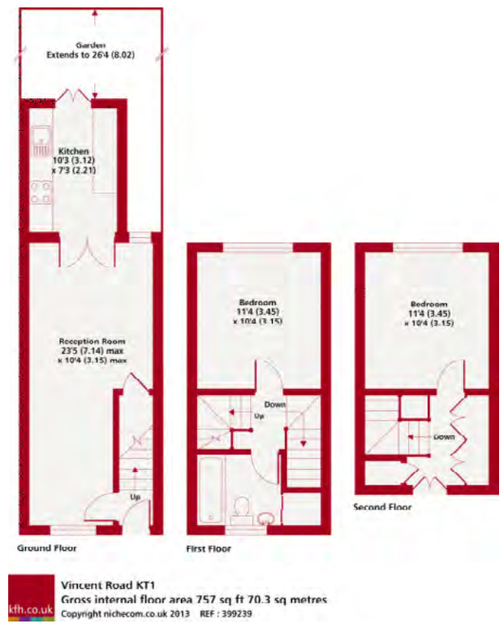


Figure 15: Floor Plan

**11 Piper Road**

5.136 11 Piper Road is located southwest of the development site and currently overlooks the existing Piper Hall community centre which is a one storey building with a pitched roof.

5.137 GIA have been able to source floor plans for this property from the online planning portal and have therefore update our 3D model to reflect these layouts.

**Existing v Proposed Max Massing Hybrid Scheme**

**Daylight (VSC & NSL) and Sunlight (APSH)**

5.138 Against the Max massing Hybrid scheme the technical analysis demonstrates none of the six rooms (0%) assessed will achieve BRE compliance in relation to both daylight methodologies (VSC and NSL).

5.139 Of the 17 windows assessed for VSC, 5 (29%) will comply with the numerical figures outlined in section 2.2.21 of the BRE Guidelines for VSC. Of the 12 affected windows, one would experience a minor alteration in VSC of 28.2% and four would experience an alteration between of 30.6% & 34.1% which is considered a Moderate Adverse Effect. The remaining seven windows would experience an alterations between 44.2%-59.1% which is considered a Major Adverse effect.

5.140 Seven of the 12 affected windows will retain a VSC in excess of 16.9% which is considered acceptable for an area of planned increased density and regeneration. The remaining five windows will retain VSC between 10.6%-13.1% which is likely to be noticeable to the occupants.

5.141 For NSL, three of the six (50%) rooms assessed would meet BRE's criteria and is therefore considered to experience a Negligible effect.

5.142 Of the three affected rooms, one would experience a minor alteration in NSL of 26.6%, whilst two would experience an alteration between 54.1%-61.2% which is considered a Major Adverse Effect.

5.143 One of the affected rooms will retain an NSL in excess of 70% which is considered acceptable for an area of planned increased density and regeneration. The two remaining rooms retain 34.5% and 37.4%, however, are understood to serve bedrooms which are considered lower sensitivity in terms of daylight.

5.144 In regard to sunlight, three of the four relevant rooms will meet the BRE criteria for APSH. The one remaining room has existing levels of sunlight below the BRE target of 25% and 5% and therefore with any massing coming forward on site it is impossible to reach the BRE target. GIA also understand that this room (F01/R1) serves a bedroom which has a lesser expectation of sunlight.

**Existing v Proposed - Illustrative Scheme**

**Daylight (VSC & NSL)and Sunlight (APSH)**

5.145 Compared with the massing of the Max Parameter scheme the Illustrative massing is smaller in height and bulk to the east of 11 Piper Road, the massing is also significantly set back compared with the Max Parameter scheme. The massing to the north of 11 Piper Road is fixed Phase 01, therefore these impacts will remain similar.

5.146 Against the Illustrative scheme the technical analysis demonstrates none of the six rooms (0%) assessed will achieve BRE compliance in relation to both daylight methodologies (VSC and NSL).

5.147 Of the 17 windows assessed for VSC, 5 (29%) will comply with the numerical figures outlined in section 2.2.21 of the BRE Guidelines for VSC. Of the 12 affected windows, six would experience a minor adverse affect in VSC between 24.5%-29.5%. The remaining six windows would experience alterations between 30.3%-32% which is considered a Moderate Adverse Effect.

5.148 11 of the 12 affected windows will retain a VSC in excess of 17.9% which is considered acceptable for an area of planned increased density and regeneration. The one remaining room (W1/F01) retains 13.4% and is understood to serve a bedroom which is considered a lower sensitivity for daylight. As can be seen in figure 17, this window is also located adjacent to the flank wall of the property's extension which limits access to daylight from the south.

5.149 For NSL, three of the six (50%) rooms assessed would meet BRE's criteria and is therefore considered to experience a Negligible effect.

5.150 Of the three affected rooms, two would experience

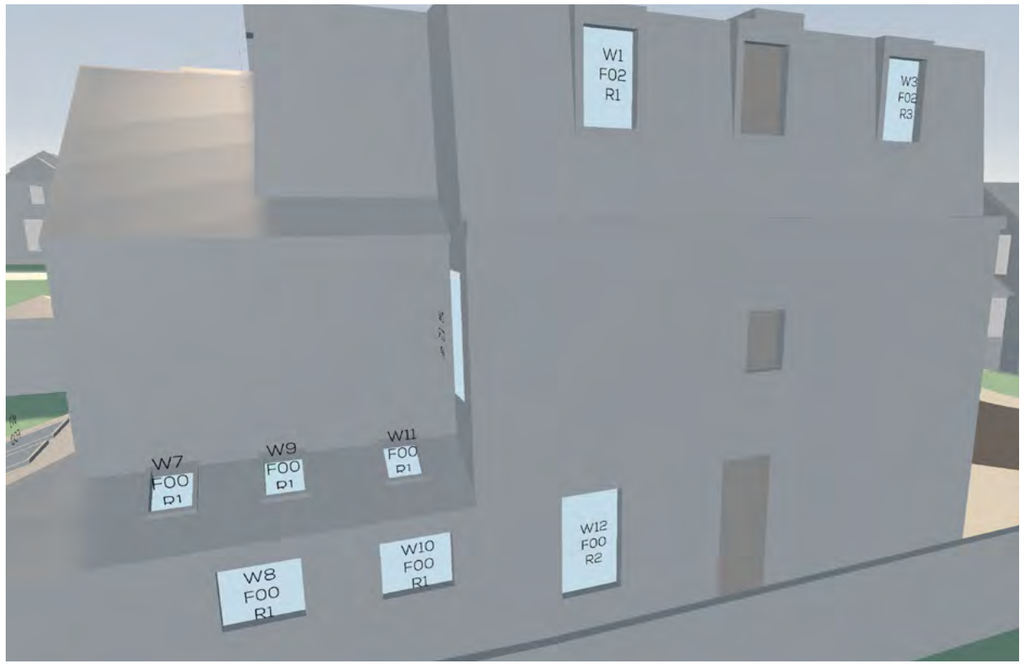


Figure 16: Window Maps of Cambridge Road Estate


Figure 17: Rear facing window map

a minor adverse alteration in NSL of 21.9% & 26.4%, whilst the remaining room would experience an alteration of 39.5% which is considered a Moderate Adverse Effect..

5.151 As GIA have been able to sourced floor plans for this property it is understood that room F01/R1 on the first floor level serves a bedroom. The BRE Guidelines outline in section 2.2.8 that bedrooms carry less significance in daylighting terms than main habitable rooms, such as living rooms. .

5.152 This room (F01/R1) is served by the same window as discussed for VSC and therefore it is slightly limited to the south for daylight access. The room will retain 45.5% NSL which is marginally below a 50% level.

5.153 In relation to sunlight, all rooms will meet the BRE criteria for sunlight APSH targets

5.154 **Conclusion**

5.155 In the ES Chapter, this property was considered a Moderate to Major Adverse affect. Due to the location opposite a large continuous massing of the Max parameter scheme and the close proximity to the receptors of the property this is not surprising. However, the proposed Illustrative scheme massing is set back further from the properties along Piper Road which allows for daylight and sunlight access.

5.156 Against the Illustrative scheme, GIA would consider that the impact to the property is Moderate adverse, however, given the majority of minor NSL impacts and the acceptable retained levels of VSC this impact is significantly lower than the Max parameter scheme.

5.157 The impacts to 11 Piper Road have been considered by reference to relevant policy, contextual considerations and local factors (see Section 04). If the scheme is to make effective use of land as per the White Paper and recent NPPF and NPPG (see Section 03) BRE transgressions will occur at neighbouring properties.

5.158 In the context of the need for housing and greater density in London, it is our opinion that although there are daylight alterations in breach of the BRE Guidelines, these are appropriate given the site context, its location within the Kingston Opportunity Area of the Cambridge Road Estate and an area which is considered both locally and in the London Plan as subject to regeneration and high density housing.

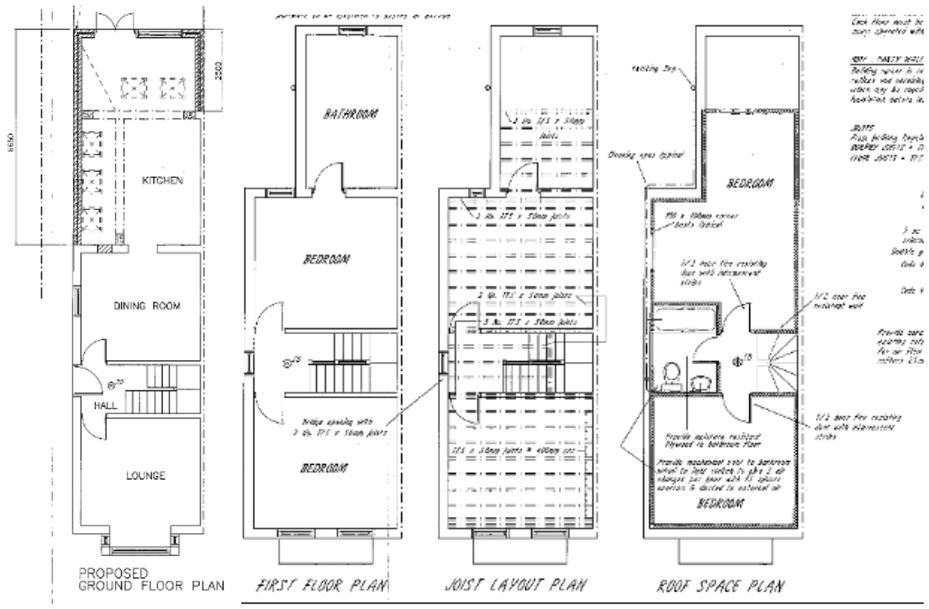


Figure 18: Floor plan

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**13 Piper Road**

5.159 13 Piper Road is located southwest of the development site and currently overlooks the driveways of the existing houses on Franklin Close.

5.160 GIA have been able to source floor plans for this property from online sales archives and have therefore update our 3D model to reflect these layouts. Since our original report, GIA have been made aware by the owner of this property that the ground floor is now open plan and have updated our model accordingly and re-run the assessments.

**Existing v Proposed Max Massing Hybrid Scheme**

**Daylight (VSC & NSL) and Sunlight (APSH)**

5.161 Against the Max massing Hybrid scheme the technical analysis demonstrates none of the three rooms (0%) assessed will achieve BRE compliance in relation to both daylight methodologies (VSC and NSL).

5.162 Of the 7 windows assessed for VSC, none (0%) will comply with the numerical figures outlined in section 2.2.21 of the BRE Guidelines for VSC. Of the 7 affected windows, three will experience minor alterations in VSC of 21.5% & 26.8%. One window would experience an alteration between of 34.6% which is considered a Moderate Adverse Effect. The remaining three windows experience alterations of 47.8% & 56.1% which is considered a Major Adverse effect.

5.163 None of the five affected windows will retain a VSC in excess of a mid-teens level which is likely to be noticeable to the occupants.

5.164 For NSL, one of the three (33.3%) rooms assessed would meet BRE's criteria and is therefore considered to experience a Negligible effect.

5.165 The two remaining rooms experience a alterations in NSL of 43.7% and 60.8% which is considered a Major Adverse Effect. One room (F00/R2) will retain in excess of 50% which is considered acceptable for an area of planned increased density and regeneration. The remaining room (F01/R1) will retain below 50% and therefore will likely be noticeable to the occupants. This room is however, understood to serve a bedroom which is considered a lower sensitivity room for daylight.

5.166 In regard to sunlight, the ground floor LKD room will meet the BRE criteria for APSH. The remaining rooms serve two bedrooms. One bedroom (F01/R2) will retain in excess of the annual BRE target of 25%. The remaining two rooms will retain levels of sunlight below the 25% annual and 5% winter BRE sunlight targets.

**Existing v Proposed - Illustrative Scheme**

**Daylight (VSC & NSL)and Sunlight (APSH)**

5.167 Compared with the massing of the Max Parameter scheme the Illustrative massing is smaller in height and bulk to the east of 13 Piper Road, the massing

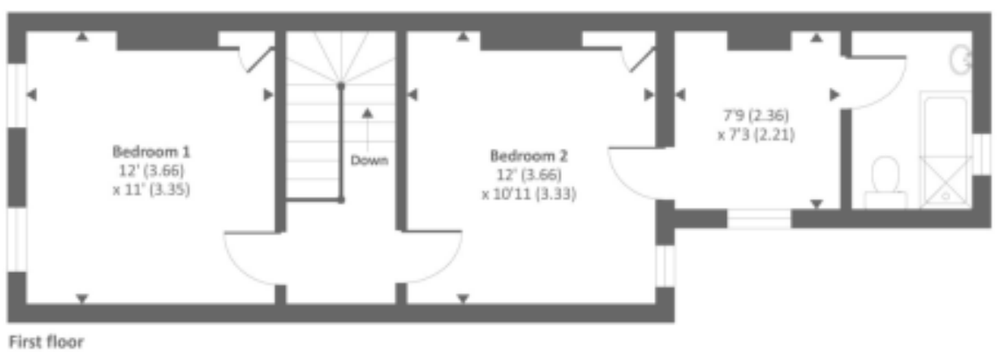


Figure 19: Floor plan


Figure 20: Window Maps of Cambridge Road Estate

is also significantly set back compared with the Max Parameter scheme.

5.168 Against the Illustrative scheme the technical analysis demonstrates one of the three rooms (33.3%) assessed will achieve BRE compliance in relation to both daylight methodologies (VSC and NSL).

5.169 Of the 7 windows assessed for VSC, 4 (57%) will comply with the numerical figures outlined in section 2.2.21 of the BRE Guidelines for VSC. Of the three affected windows, two will experience a minor adverse affect in VSC of 26.9% and 29.3%. The remaining window experiences an alteration between of 33.8% which is considered a Moderate Adverse Effect.

5.170 In considering the retained VSC levels, one of the affected windows (W6/F00) will retain 20% VSC which is considered good for an area of planned increased density. The remaining affected ground floor window (W1/F00) has existing VSC below 15%, this is likely due to the flank elevations of the extensions of 13 Piper Road and 15 Piper Road which limit access to daylight from oblique angles. The one remaining room (W1/F01) retains 14.7% and is understood to serve a bedroom which is considered a lower sensitivity for daylight. As can be seen in figure 20, this window is also located adjacent to the flank wall of the property's extension which limits access to daylight from the north.

5.171 For NSL, all three rooms assessed would meet BRE's criteria and is therefore considered to experience a Negligible effect.

5.172 In relation to sunlight, against the Illustrative scheme, two of the three rooms will meet the BRE criteria for APSH. The remaining room (F01/R1) is understood to serve a bedroom. The BRE suggests that bedrooms are less important in 3.2.3:

5.173 *"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 degrees of due south. Kitchens and bedrooms are less important, although care should be*

*taken not to block too much sun."*

5.174 The remaining room will continue to retain 23% annual sunlight against a 25% BRE target, which is considered minor. The winter sunlight however will dip to 2% against a 5% BRE target which could be noticeable.

**Conclusion**

5.175 In the ES Chapter, this property was considered a Moderate to Major Adverse affect. Due to the location opposite a large continuous massing of the Max parameter scheme and the close proximity to the receptors of the property this is not surprising. However, the proposed Illustrative scheme massing is set back further from the properties along Piper Road which allows for daylight and sunlight access.

5.176 Against the Illustrative scheme, GIA would consider that the impact to the property is Moderate adverse, however, given that the majority of rooms and windows will meet the BRE criteria for daylight (VSC and NSL) and sunlight (APSH) this is a significant improvement on the results of the Max massing scheme.

5.177 The impacts to 13 Piper Road have been considered by reference to relevant policy, contextual considerations and local factors (see Section 04). If the scheme is to make effective use of land as per the White Paper and recent NPPF and NPPG (see Section 03) BRE transgressions will occur at neighbouring properties.

5.178 In the context of the need for housing and greater density in London, it is our opinion that although there are daylight alterations in breach of the BRE Guidelines, these are appropriate given the site context, its location within the Kingston Opportunity Area of the Cambridge Road Estate and an area which is considered both locally and in the London Plan as subject to regeneration and high density housing.

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**61 Cambridge Grove Road**

5.179 61 Cambridge Grove Road is located south of the site on the corner of Cambridge Grove Road and Vincent Road. The property faces north over existing bungalow housing and to the west set back 2 storey housing circa 15m distance. GIA have been unable to find floor plans for this property and therefore have adopted industry standard 4.3m depth for the room layouts on an assumed unknown use.

**Existing v Proposed Max Massing Hybrid Scheme**

**Daylight (VSC & NSL) and Sunlight (APSH)**

5.180 Against the Max massing Hybrid scheme the technical analysis demonstrates 0 rooms (0%) assessed will achieve BRE compliance in relation to both VSC and NSL.

5.181 Of the 18 windows assessed for VSC, 0 (0%) will comply with the BRE Guidelines for VSC. Three would experience minor alterations in VSC between 22.1%-26.7% and one would experience an alteration of 34.7% which is considered a Moderate Adverse Effect. The remaining 14 windows would experience alterations between 58.7%-78.6% which is considered a Major Adverse effect.

5.182 Of the windows which are affected, four will retain VSC levels in excess of 16% which is considered acceptable for an area of regeneration and increased density. The remaining windows will retain levels below 15% VSC.

5.183 In terms of NSL, three of the 11 (27.3%) rooms assessed would meet BRE's criteria. Of the eight affected rooms, one would experience a minor alteration of 22.8% and one would experience an alteration of 34.9% which is considered a Moderate Adverse Effect. The remaining 6 rooms would experience alterations between 51.7%-91.1% which is considered a Major Adverse effect.

5.184 One of the affected rooms will retain in excess of 75% which is considered acceptable given the regeneration of the area. The remaining rooms will retain below 50% NSL.

5.185 In relation to sunlight, all rooms will meet the BRE criteria for sunlight APSH targets.

**Existing v Proposed - Illustrative Scheme**

**Daylight (VSC & NSL)**

5.186 Against the Illustrative scheme the technical analysis demonstrates 3/11 rooms will achieve BRE compliance in relation to both VSC and NSL.

5.187 Of the 18 windows assessed for VSC, 4 (22.2%) will comply with the numerical figures outlined in section 2.2.21 of the BRE Guidelines for VSC. Four of the windows experience transgressions between 34.4%-39.1% which is considered moderate. The remaining 10 windows would experience alterations between 41.8%-49.9% which is considered a Major Adverse effect.

5.188 Of the windows which are affected, 13 will retain VSC levels in excess of 15% which is considered acceptable for an area of regeneration and increased density. The one remaining window will retain a level below 15% VSC, this window however, is limited by the flank wall of the existing property and is a small window which GIA believe is unlikely to serve a habitable space.

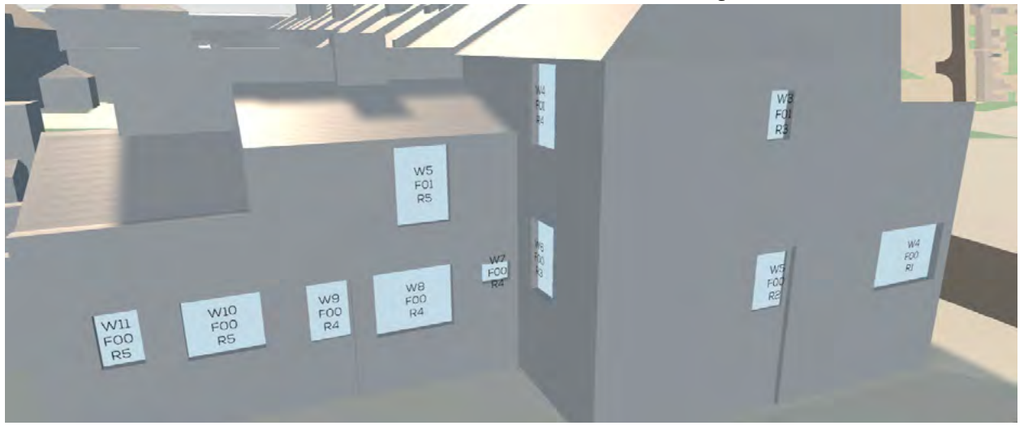


Figure 21: North facade window map

Figure 22: Window Maps of Cambridge Road Estate

5.189 In terms of NSL, 5 of the 11 (45%) rooms assessed would meet BRE's criteria and are therefore considered to experience a Negligible effect.

5.190 Of the 6 affected rooms, three would experience minor alterations between 20.6%-24.5%. The remaining 3 rooms will experience alterations between 44.5%-60.5% which is considered a Major Adverse effect. Three of the affected rooms will retain in excess of 74% which is considered acceptable given the regeneration of the area. Two rooms will retain 48.1% & 48.2% which is marginally below a 50% level. The one remaining room will retain below 50% NSL. This room (F01/R5) is located on the first floor and is served by one window. From external observation this room may serve a bedroom which would have a lower expectation of daylight due to its use.

5.191 In relation to sunlight, all rooms will meet the BRE criteria for sunlight APSH targets

**Conclusion**

5.192 In the ES Chapter, this property was considered Major Adverse. Against the Illustrative scheme, there are still percentage alterations in VSC and NSL which could be considered major however, the results are much improved for both methodologies and GIA would now consider this property Moderate adverse as all but one window will retain in excess of 15% VSC.

5.193 The impacts to 61 Cambridge Grove Road have been considered by reference to relevant policy, contextual considerations and local factors (see Section 04). If the scheme is to make effective use of land as per the White Paper and recent NPPF and NPPG (see Section 03) BRE transgressions will occur at neighbouring properties.

5.194 In the context of the need for housing and greater density in London, it is our opinion that although there are daylight and sunlight alterations in breach of the BRE Guidelines, these are appropriate given the site context and its location within the Kingston Opportunity Area.

**Vibe Student Living 66-70 Cambridge Road**

5.195 Vibe Student Living is located north of the site on the corner of Cambridge Road and St Peters Road. The property faces west over existing Grantchester House, south over Westwick House and Madingley Tower. GIA have been unable to find floor plans for this property and therefore have adopted industry standard 4.3m depth for the room layouts on an assumed unknown use.

5.196 This property is understood to have commercial units on the ground floor which have been excluded from assessment. This property serves as student accommodation, the BRE states that habitable residential properties should be the primary consideration for assessment. However, the BRE also states that if a property has a reasonable expectation of daylight this too should be assessed. GIA have assessed this property as part of the ES Chapter, however, given the transient nature of use of the rooms in this property, it is considered a lower sensitivity in terms of daylight. Any affected room or window should be weighed against whether the change in daylight to the occupants would be noticeable to cause a significant affect.

5.197 In consideration of this, GIA would consider that the daylight and sunlight results be viewed with less sensitivity to that of a residential property.

**Existing v Proposed Max Massing Hybrid Scheme**

**Daylight (VSC & NSL) and Sunlight (APSH)**

5.198 Against the Max massing Hybrid scheme the technical analysis demonstrates 16 of the 215 rooms (17.1%) assessed will achieve BRE compliance in relation to both daylight methodologies (VSC and NSL).

5.199 Of the 253 windows assessed for VSC, 26 (10.3%) will comply with the numerical figures outlined in section 2.2.21 of the BRE Guidelines for VSC. Of the 227 affected windows, nine would experience an alteration in VSC between 21.7%-29.7% which is considered a Minor Adverse effect and 12 would experience an alteration between 30%-39.5% which is considered a Moderate Adverse Effect. The remaining 206 windows would experience alterations between 40%-94.2% which is considered a Major Adverse effect.

5.200 Of the 227 affected windows, 32 have existing VSC levels below 15% therefore any massing on the development site would result in a disproportionate percentage alteration. These windows are primarily located in the courtyard of the building, therefore access to light is limited by the flank elevations which surround the courtyard.

5.201 49 of the 227 affected windows will retain a VSC level in excess of 15%, which is considered acceptable for an area of planned increase density and regeneration. The remaining 178 windows will retain levels below a 15% VSC level which could be considered noticeable to the occupants, if similar weight is added to student accommodation.

5.202 For NSL, 42 of the 215 (19.5%) rooms assessed would meet BRE's criteria and are therefore considered to experience a Negligible effect.

5.203 Of the 173 affected rooms, three would experience an alteration in NSL between 20.2%-28.2% which is considered a Minor Adverse effect and five would experience an alteration between 30.5%-39% which is considered a Moderate Adverse Effect. The remaining 165 rooms would experience alterations between 40.3%-96.6% which is considered a Major Adverse effect.

5.204 17 of the 173 affected rooms will retain an NSL in excess of 50% which is considered acceptable for an area of planned increased density and regeneration. A further 15 rooms will retain between 40.4%-47.5% which s marginally below a 50% level.

5.205 In regard to sunlight, a total of 153 rooms were assessed for sunlight within this building of which 1 (0.7%) would meet the BRE's criteria for both Annual and Winter PSH.

5.206 For Annual PSH, 17 of the 153 (11.1%) rooms assessed would meet BRE's criteria and are therefore considered to experience a Negligible effect.

5.207 Of the 136 rooms affected annually, one would experience an alteration in Annual PSH between 20-29.9% which is considered a Minor Adverse effect and three would experience an alteration between 30-39.9% which is considered a Moderate Adverse Effect. The remaining 132 rooms would experience an alteration in excess of 40% which is considered a Major Adverse effect.

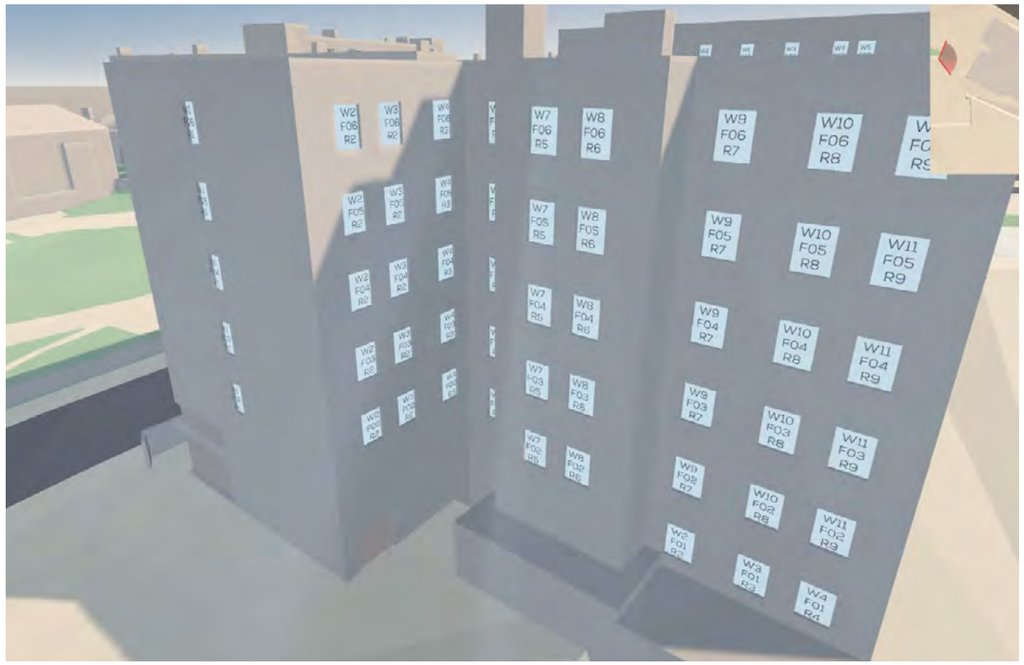


Figure 23: Window Maps of Cambridge Road Estate

5.208 Of the 136 affected rooms, 48 would retain between 15-24% APSH, which may be considered commensurate within an area of proposed regeneration. Additionally, owing to the underdeveloped nature of the Site, impacts of this magnitude can be expected.

5.209 For Winter PSH, one of the 153 (0.7%) rooms assessed would meet BRE's criteria and is therefore considered to experience a Negligible effect. The remaining 152 see losses greater than 40% which is considered a Major Adverse effect.

5.210 **Existing v Proposed - Illustrative Scheme**

**Daylight (VSC & NSL)and Sunlight (APSH)**

5.211 The largest portion in both height and mass is located opposite the Vice Student Living in the Max Parameter scheme therefore the results are predictably significant to the windows and rooms for both daylight and sunlight. In the Illustrative massing, there are gaps located between blocks in this area of the site which allows for greater access to daylight.

5.212 Against the Illustrative scheme the technical analysis demonstrates 45 of the 215 rooms (20.9%) assessed will achieve BRE compliance in relation to both daylight methodologies (VSC and NSL).

5.213 Of the 253 windows assessed for VSC, 75 (29.6%) will comply with the numerical figures outlined in section 2.2.21 of the BRE Guidelines for VSC. Of the 178 affected windows, 42 would experience an alteration in VSC between 20.8%-29.8% which is considered a Minor Adverse effect and 41 would experience an alteration between 30.2%-39.4% which is considered a Moderate Adverse Effect. The remaining 95 windows would experience alterations between 40.6%-78% which is considered a Major Adverse effect.

5.214 Of the 178 affected windows, 19 have existing VSC levels below 15% therefore any massing on the development site would result in a disproportionate percentage alteration. These windows are primarily located in the courtyard of the building or located adjacent to a pop out flank wall, therefore access to light is limited by the flank elevations which surround the courtyard.

5.215 115 of the 178 (64.6%) affected windows will retain a VSC level in excess of 15%, which is considered acceptable for an area of planned increase density and regeneration. This demonstrates a significant improvement to the max massing scheme.

5.216 Eight windows will retain between 14% -14.9% VSC which is marginally below a 15% level. The remaining 55 windows will retain levels below a 15% VSC level which could be considered noticeable to the occupants, if similar weight is added to student accommodation.

5.217 For NSL, 73 of the 215 (34%) rooms assessed would meet BRE's criteria and are therefore considered to experience a Negligible effect.

5.218 Of the 142 affected rooms, 14 would experience an alteration in NSL between 22.6%-29.5% which is considered a Minor Adverse effect and 50 would experience an alteration between 30.1%-39.9% which is considered a Moderate Adverse Effect. The remaining 78 rooms would experience alterations between 40.1%-78.5% which is considered a Major Adverse effect.

5.219 91 of the 142 affected rooms will retain an NSL in excess of 50% which is considered acceptable for an area of planned increased density and regeneration. A further 16 rooms will retain between 40.4%-49.2% which s marginally below a 50% level. Six of the remaining 35 rooms have existing NSL levels below 50% therefore meeting a 50% is not possible. The remaining 29 rooms will retain levels below 50% which could be noticeable to occupants, if similar weight is considered for student accommodation.

5.220 In regard to sunlight, a total of 153 rooms were assessed for sunlight within this building of which 109 (71.2%) would meet the BRE's criteria for both Annual and Winter PSH. Which is a significant improvement on the 1 room against the Max Massing scheme.

5.221 For Annual PSH, 16 of the 44 (36.4%) affected rooms assessed would meet BRE's criteria and are therefore considered to experience a Negligible effect.

5.222 Of the 28 rooms affected annually, eight have sunlight levels below the BRE targets therefore meeting the guidelines is not possible.

5.223 Of the remaining 20 rooms 19 would retain between 15%-24% annual PSH against a 25% BRE target which may be considered commensurate within an area of proposed regeneration. Additionally, owing to the underdeveloped nature of the Site, impacts of this magnitude can be expected. The remaining room (F06/R3) can be seen in figure 27 and clearly shows that the room is limited from the existing architecture of the building to the south and east.

5.224 For Winter PSH, two of the 44 (0.7%) affected rooms assessed would meet BRE's criteria and are therefore considered to experience a Negligible effect. 16 rooms will retain Winter PSH of 4% against a 5% target which is considered minor adverse. The remaining 26 rooms will retain lower than this and therefore is likely to be noticeable to the occupants should sunlight to student accommodation be weighed similarly to residential housing.

**Conclusion**

5.225 In the ES Chapter, this property was considered a Major Adverse affect. The Max parameter scheme in this area of the site is one large continuous massing including the highest point of the proposed scheme which limits access to daylight to the receptors of Vibe Student Living. The considered massing for the Illustrative scheme in this area is for two separate blocks with significant space between the proposed blocks which will allow for greater access to daylight.

5.226 Against the Illustrative scheme, there are still some significant impacts to the rooms and windows within this property. However, compared with the Max Parameter scheme there are significant betterments. Nevertheless, GIA would consider that the impact to the property is still considered Major adverse. However, given that the rooms and windows in the property are likely to serve student bedrooms it is arguable whether there is sensitivity to the occupants given the transient nature of the occupants.

5.227 The impacts to Vibe Student Living have been considered by reference to relevant policy, contextual considerations and local factors (see Section 04). If the scheme is to make effective use of land as per the White Paper and recent NPPF and NPPG (see Section 03) BRE transgressions will occur at neighbouring properties.


Figure 24: Window Map

5.228 In the context of the need for housing and greater density in London, it is our opinion that although there are daylight alterations in breach of the BRE Guidelines, these are considered appropriate given the site context, its location within the Kingston Opportunity Area of the Cambridge Road Estate and the impetus that the occupants to this property are unlikely to be greatly affected by a change in daylight and sunlight.


Figure 25: NSL Contour Plot

**Cascadia House, Cambridge Road**

5.229 142 Cambridge Road is located northeast of the site. GIA have been able to source partial find floor plans for this property and therefore have updated those where possible and adopted industry standard 4.3m depth for the room layouts on an assumed unknown use. where not known.

5.230 As we do not have full floor plans for this property, to present a worst case scenario we have copied the upper windows and rooms and included these on the ground floor as well behind the rear wall so as to not miss any potential windows and rooms (if any) which were not visible from our site visit and survey. If it is the case there are no habitable rooms located here then no impact will occur to the ground floor.

**Existing v Proposed Max Massing Hybrid Scheme**

**Daylight (VSC & NSL) and Sunlight (APSH)**

5.231 Against the Max massing Hybrid scheme the technical analysis demonstrates 6 of the 35 rooms (17%) assessed will achieve BRE compliance in relation to both daylight methodologies (VSC and NSL).

5.232 Of the 87 windows assessed for VSC, 20 (23%) will comply with the numerical figures outlined in section 2.2.21 of the BRE Guidelines for VSC. Of the 67 affected windows, three would experience an alteration in VSC between 20.7%-26% which is considered a Minor Adverse effect whilst 64 would experience alterations between 44%-83.9% which is considered a Major Adverse Effect.

5.233 15 of the 67 affected windows have existing VSC levels below 15%, 14 of these windows are in single figures for VSC therefore any massing will create a disproportionate percentage change. These windows are all located on the ground floor and face the existing partition wall between Cascadia House and the development site, as discussed above it is not clear whether these serve habitable spaces or not.

5.234 One of the affected windows will retain a VSC of 18%, which is considered acceptable for an area of planned increased density and regeneration. The remaining windows will retain levels below a mid-teens value which would be considered noticeable to the occupants.

5.235 For NSL, eight of the 35 (22.9%) rooms assessed would meet BRE's criteria and are therefore considered to experience a Negligible effect.

5.236 Of the 27 affected rooms, one would experience an alteration in NSL between 30-39.9% which is considered a Moderate Adverse effect whilst 26 would experience an alteration in excess of 40% which is considered a Major Adverse effect.

5.237 Three of the 27 affected rooms will retain an NSL in excess of 50% which is considered acceptable for an area of planned increased density and regeneration. Four of the remaining rooms are located on the ground floor and may not be habitable rooms. The remaining 20 rooms will retain below 50% NSL which would likely be noticeable to the occupants.

5.238 In regard to sunlight, a total of 33 rooms were assessed for sunlight within this building of which 12 (36.4%) would meet the BRE's criteria for both Annual and Winter PSH.

5.239 For Annual PSH, 15 of the 33 (45.5%) rooms assessed would meet BRE's criteria and are therefore considered to experience a Negligible effect. The remaining 18 see losses greater than 40% which is considered a Major Adverse effect.

5.240 Of the 33 affected rooms, 12 would retain 17-23% APSH, which may be considered commensurate within an area of proposed regeneration. Additionally, the sunlight availability is limited in the baseline by shading from balconies, with the high baseline values a function of the underdeveloped nature of the Site.

5.241 For Winter PSH, 15 of the 33 (45.5%) rooms assessed would meet BRE's criteria and are therefore considered to experience a Negligible effect.

**Existing v Proposed - Illustrative Scheme**

**Daylight (VSC & NSL)and Sunlight (APSH)**

5.242 Compared with the massing of the Max Parameter scheme the Illustrative massing allows for gaps between blocks in this area of the site which allows for greater access to daylight.

5.243 Against the Illustrative scheme the technical analysis demonstrates 12 of the 35 rooms (34.4%) assessed will achieve BRE compliance in relation to both daylight methodologies (VSC and NSL).


Figure 26: Window Maps of Cambridge Road Estate

5.244 Of the 87 windows assessed for VSC, 33 (37.9% will comply with the numerical figures outlined in section 2.2.21 of the BRE Guidelines for VSC. Of the 54 affected windows, 14 would experience an alteration in VSC between 25.1%-29.9% which is considered a Minor Adverse effect whilst 30 would experience alterations between 30.2%-39% which is considered a moderate adverse effect. The remaining 10 windows experience alterations between 42.2%-53% which is considered a Major Adverse Effect.

5.245 Three of the 54 affected windows have existing VSC levels below 15%, all three windows are in single figures for VSC therefore any massing will create a disproportionate percentage change. These windows are all located on the ground floor and face the existing partition wall between Cascadia House and the development site, as discussed previously it is not clear whether these serve habitable spaces or not.

5.246 Of the remaining 51 windows 39 will retain a VSC in excess of 15.8%, which is considered acceptable for an area of planned increased density and regeneration. The remaining 12 windows will retain levels below a mid-teens value which would be considered noticeable to the occupants.

5.247 For NSL, 21 of the 35 (60%) rooms assessed would meet BRE's criteria and are therefore considered to experience a Negligible effect.

5.248 Of the 14 affected rooms, one would experience an alteration in NSL of 25.2%. Five rooms will experience alterations between 33-38.6% which is considered a Moderate Adverse effect. The remaining 7 rooms experience alterations between 40.9%-53.7% which is considered a Major Adverse effect.

5.249 Seven of the 14 affected rooms will retain an NSL in excess of 50% which is considered acceptable for an area of planned increased density and regeneration. Six of the remaining rooms will retain NSL between 40.8%-47.6% which is marginally below a 50% level. The remaining room is located on the ground floor and may not serve a habitable space.

5.250 In regard to sunlight, a total of 33 rooms were assessed for sunlight within this building of which 29 (87.9%) would meet the BRE's criteria for both Annual and Winter PSH.

5.251 Two of the four remaining room are located on the ground floor and may not be habitable rooms. One of the two remaining rooms (F01/R10) will retain 26% Annual PSH against a 25% BRE target, whilst not meeting the winter PSH with 3%. The remaining room (F01/R9) will meet the winter PSH target 5% whilst not meeting the Annual PSH at 18%.

**Conclusion**

5.252 In the ES Chapter, this property was considered a Major Adverse affect. The Max parameter scheme in this area of the site is one large continuous massing which limits access to daylight to the rear receptors of Cascadia House. The considered massing for the Illustrative scheme in this area is for two separate blocks with significant space between the proposed blocks which will allow for greater access to daylight.

5.253 Against the Illustrative scheme, GIA would consider that the impact to the property is Moderate adverse, however, given that the majority of rooms and windows will either meet the BRE criteria for daylight (VSC and NSL) and sunlight (APSH) or retain daylight levels which are considered acceptable for an area of planned increased density and regeneration this demonstrates a significant improvement on the results of the Max massing scheme.

5.254 The impacts to Cascadia House have been considered by reference to relevant policy, contextual considerations and local factors (see Section 04). If the scheme is to make effective use of land as per the White Paper and recent NPPF and NPPG (see Section 03) BRE transgressions will occur at neighbouring properties.

5.255 In the context of the need for housing and greater density in London, it is our opinion that although there are daylight alterations in breach of the BRE Guidelines, these are appropriate given the site context, its location within the Kingston Opportunity Area of the Cambridge Road Estate and an area which is considered both locally and in the London Plan as subject to regeneration and high density housing.

Figure 27: Window map

**142 Cambridge Road**

5.256 142 Cambridge Road is located northeast of the site. GIA have been unable to find floor plans for this property and therefore have adopted industry standard 4.3m depth for the room layouts on an assumed unknown use.

5.257 **Existing v Proposed Max Massing Hybrid Scheme**

**Daylight (VSC & NSL) and Sunlight (APSH)**

5.258 Against the Max massing Hybrid scheme the technical analysis demonstrates 0 rooms (0%) assessed will achieve BRE compliance in relation to both daylight methodologies (VSC and NSL).

5.259 Of the two windows assessed for VSC, 0 (0%) will comply with the numerical figures outlined in section 2.2.21 of the BRE Guidelines for VSC. The affected windows see transgressions of 55.4% & 60.4% which is considered major adverse.

5.260 None of the windows will retain VSC levels in excess of a mid-teens level and therefore the impact will be noticeable to the occupants.

5.261 Whilst we do not have floor plans we have undertaken NSL assessment on an assumed basis. In terms of NSL, none of the rooms assessed meet the BRE's criteria for NSL. The rooms will experience an alteration of 45.9% and 74.5% which is considered a Major Adverse effect. The room on the first floor (F01/R1) will retain in excess of 50% which is considered acceptable for an area of planned increased density and regeneration. The remaining room on the ground floor will retain 25.2% NSL which will be noticeable to the occupants.

5.262 In regard to sunlight, both rooms will retain in excess of the BRE 25% target for annual APSH, however will not meet the winter target. One room will retain 4% winter sunlight against a 5% target which is considered minor, the remaining room will retain 2% winter sunlight which would likely be noticeable to the occupants.

**Existing v Proposed - Illustrative Scheme**

**Daylight (VSC & NSL) and Sunlight (APSH)**

5.263 Compared with the massing of the Max Parameter scheme the Illustrative massing allows for gaps between blocks in this area of the site which allows for greater access to daylight.

5.264 Against the Illustrative scheme the technical analysis demonstrates 0 rooms will achieve BRE compliance in relation to both VSC and NSL.

5.265 Of the two windows assessed for VSC, 0 (0%) will comply with the numerical figures outlined in section 2.2.21 of the BRE Guidelines for VSC. One of the windows experiences a minor alteration of 24.1% against a 20% BRE target. The remaining window experiences a moderate alteration of 36.5%.

5.266 In considering the retained VSC, all affected windows will retain VSC levels in excess of 20.7% which is considered a good level given the regeneration and planned increased density of the area.

5.267 In terms of NSL, one of the two (50%) rooms assessed would meet BRE's criteria and therefore considered to experience a Negligible effect.

5.268 The remaining room will experience an alteration of 56% which is considered Major adverse. The room will retain 43.4%.

5.269 In relation to sunlight, against the illustrative scheme, both rooms will meet the BRE criteria for sunlight.

5.270 **Conclusion**

5.271 In the ES Chapter, this property was considered a Moderate to Major Adverse affect. Due to the location opposite a large continuous massing of the Max parameter scheme and the close proximity to the receptors of the property this is not surprising. However, the proposed Illustrative scheme massing is set back further from the properties along Cambridge Road and allows for gaps between blocks which allows for greater access to daylight and sunlight.

5.272 Against the Illustrative scheme, GIA would consider that the impact to the property is Moderate adverse, however, given that there are good levels of retained daylight and sunlight (APSH), these are a significant improvement on the results of the Max parameter scheme.


Figure 28: Window Maps of Cambridge Road Estate

5.273 The impacts to 142 Cambridge Road have been considered by reference to relevant policy, contextual considerations and local factors (see Section 04). If the scheme is to make effective use of land as per the White Paper and recent NPPF and NPPG (see Section 03) BRE transgressions will occur at neighbouring properties.

5.274 In the context of the need for housing and greater density in London, it is our opinion that although there are daylight alterations in breach of the BRE Guidelines, these are appropriate given the site context, its location within the Kingston Opportunity Area of the Cambridge Road Estate and an area which is considered both locally and in the London Plan as subject to regeneration and high density housing.

Figure 29: Site plan

**2 Hampden Road**

5.275 2 Hampden Road is located northeast of the development site and currently overlooks the existing Duxford House to the west and Childerley House to the south.

5.276 The property is recently developed and GIA have been able to source floor plans for this property from the online planning portal and have therefore update our 3D model to reflect these layouts.

**Existing v Proposed Max Massing Hybrid Scheme**

**Daylight (VSC & NSL) and Sunlight (APSH)**

5.277 Against the Max massing Hybrid scheme the technical analysis demonstrates none of the 60 rooms (0%) assessed will achieve BRE compliance in relation to both daylight methodologies (VSC and NSL).

5.278 For VSC, 21 of the 104 (20.2%) windows assessed would meet BRE's criteria and are therefore considered to experience a Negligible effect.

5.279 Of the 83 affected windows, four would experience an alteration in VSC between 23.3%-29.3% which is considered a Minor Adverse effect and 12 would experience an alteration between 30.5%-39.4% which is considered a Moderate Adverse Effect. The remaining 67 windows would experience an alterations between 40.2%-96% which is considered a Major Adverse effect.

5.280 Of the 83 affected windows, 36 serve bedrooms which are considered a lower sensitivity in terms of daylight.

5.281 43 of the 83 affect rooms will retain a VSC level in excess of 15%, which is considered acceptable for an area of planned increased density and regeneration. Due to the existing architecture of the building, 15 windows have baseline VSC levels below 15% and therefore this target is impossible. The remaining rooms will retain levels below a 15% VSC level which is likely to be noticeable to occupants.

5.282 For NSL, 13 of the 60 (21.7%) rooms assessed would meet BRE's criteria and are therefore considered to experience a Negligible effect.

5.283 Of the 47 affected rooms, two would experience an alteration in NSL between 21.7%-29.4% which is considered a Minor Adverse effect and four would experience an alteration between 33.5%-39.1% which is considered a Moderate Adverse Effect. The remaining 41 rooms would experience alterations between 41.3%-86.3% which is considered a Major Adverse effect.

5.284 34 of the 47 affected rooms serve bedrooms which are considered a lower sensitivity in terms of daylight.

5.285 Nine of the affected rooms will retain an NSL in excess of 50%, which is considered acceptable for an area of planned increased density and regeneration. 13 rooms will retain between 40.9%-49.6% which is marginally below a 50% level. The remaining 25 rooms will retain levels below 50%. 16 of these rooms serve bedrooms which have a lower sensitivty to daylight. The NSL levels to the remaining nine rooms would be considered noticeable to the occupants.

5.286 In regard to sunlight, 14 of the 26 (53.8%) rooms assessed would meet BRE's criteria and are therefore considered to experience a Negligible effect. The remaining 12 see losses greater than 40% which is considered a Major Adverse effect.

5.287 The façade of this building is defined by balconies, which inherently limits sunlight availability.

**Existing v Proposed - Illustrative Scheme**

**Daylight (VSC & NSL)and Sunlight (APSH)**

5.288 Compared with the massing of the Max Parameter scheme the Illustrative massing allows for gaps between blocks in this area of the site which allows for greater access to daylight. The blocks neighbouring 2 Hampden Road are also circa 8-10m lower in height and stepped further away from the receptors.

5.289 Against the Illustrative scheme the technical analysis demonstrates 21 of the 60 rooms (35%) assessed will achieve BRE compliance in relation to both daylight methodologies (VSC and NSL).

5.290 For VSC, 68 of the 104 (65.4%) windows assessed would meet BRE's criteria and are therefore considered to experience a Negligible effect.

5.291 Of the 36 affected windows, seven would experience an alteration in VSC between 24.6%-28.1% which is considered a Minor Adverse effect and 17 would

Figure 30: Window Maps of Cambridge Road Estate

Figure 31: Window map

experience an alteration between 30%-39.1% which is considered a Moderate Adverse Effect. The remaining 12 windows would experience an alterations between 41.6%-57% which is considered a Major Adverse effect.

5.292 Of the 36 affected windows, 21 serve bedrooms which are considered a lower sensitivity in terms of daylight.

5.293 30 of the 36 affect rooms will retain a VSC level in excess of 16.3%, which is considered acceptable for an area of planned increased density and regeneration. Due to the existing architecture of the building, the remaining six windows have baseline VSC levels below 15% and therefore this target is not possible.

5.294 For NSL, 32 of the 60 (53.3%) rooms assessed would meet BRE's criteria and are therefore considered to experience a Negligible effect.

5.295 Of the 28 affected rooms, 7 would experience an alteration in NSL between 22.7%-29.6% which is considered a Minor Adverse effect and 9 would experience an alteration between 30%-37.8% which is considered a Moderate Adverse Effect. The remaining 12 rooms would experience alterations between 40.9%-60.8% which is considered a Major Adverse effect.

5.296 21 of the 28 affected rooms serve bedrooms which are considered a lower sensitivity in terms of daylight.

5.297 20 of the 28 affected rooms will retain an NSL in excess of 50%, which is considered acceptable for an area of planned increased density and regeneration. Five rooms will retain between 40%-48.4% which is marginally below a 50% level. The remaining three rooms will retain levels below 50%. All three rooms serve bedrooms which have a lower sensitivty to daylight.

5.298 In regard to sunlight, 21 of the 26 (80.8%) rooms assessed would meet BRE's criteria and are therefore considered to experience a Negligible effect. Three of the remaining nine rooms have existing APSH levels below the BRE targets and therefore it is not possible to meet the guidelines. One of the remaining two rooms (F01/R1) will retain 32% Annual PSH against a 25% BRE target whilst retaining a 4% winter PSH against a 5% target which is considered minor. The remaining room (F01/R10) will retain 23% annual PSH against a 25% target, which is considered minor. The room will excess the winter PSH retaining 8% winter PSH.

**Conclusion**

5.299 In the ES Chapter, this property was considered a Major Adverse affect. The Max parameter scheme in this area of the site is one large continuous massing which limits access to daylight to the rear receptors of 2 Hampden Road, which are not helped by the existing overhanging balconies which also serve to limit daylight access.

5.300 Nevertheless, the considered massing for the Illustrative scheme in this area allows for gaps between blocks of the site which allows for greater access to daylight. The blocks neighbouring 2 Hampden Road are circa 8-10m lower in height and stepped further away from the receptors.

5.301 Against the Illustrative scheme, GIA would consider that the impact to the property is Moderate adverse, however, given that the majority of rooms and windows will either meet the BRE criteria for daylight (VSC and NSL) and sunlight (APSH) or retain daylight levels which are considered acceptable for an area of planned increased density and regeneration, this results in a significant improvement on the Max Parameter scheme. This is even true given the existence of overhanging balconies, GIA have not considered it necessary for a without balcony assessment which is a tool allowed for in the BRE as the alteration in massing to the scheme promotes a betterment in daylight and sunlight without the need for this assessment..

5.302 The impacts to 2 Hampden Road have been considered by reference to relevant policy, contextual considerations and local factors (see Section 04). If the scheme is to make effective use of land as per the White Paper and recent NPPF and NPPG (see Section 03) BRE transgressions will occur at neighbouring properties.

5.303 In the context of the need for housing and greater density in London, it is our opinion that although there are daylight alterations in breach of the BRE Guidelines, these are appropriate given the site context, its location within the Kingston Opportunity Area of the Cambridge Road Estate and an area which is considered both locally and in the London

Figure 32: Window Maps of Cambridge Road Estate

Plan as subject to regeneration and high density housing.

Figure 33: Floor Plans 2 Hampden Road

# 6 OVERSHADOWING IMPACTS TO NEIGHBOURING AMENITY AREAS

This section details the overshadowing impacts from the Illustrative scheme in relation to the relevant amenity areas surrounding the Site.

6.1 As with the daylight and sunlight assessments, the overshadowing assessments discussed in this report are to demonstrate a comparison between the Maximum Parameter scheme which is assessed for planning submission as part of the wider ES and the Illustrative Scheme which is a hypothetical scenario of what may come forward for detailed planning in RMA.

6.2 The assessments discussed in this report therefore should serve as a more likely impact of the scheme which will come forward in the future albeit on the understanding that this is not what is being submitted for planning for this Hybrid outline application.

## SURROUNDING PROPERTIES - MAX PARAMETER RESULTS

6.3 GIA have identified 138 rear gardens and amenity areas surrounding the site as relevant for overshadowing assessment.

6.4 Against the Maximum Parameter Scheme discussed in Chapter 9 of the ES Chapter, the following 131 amenity areas will meet the BRE criteria for overshadowing (Negligible in the ES Chapter):

- PYRAMID COURT, 99 HAWKS ROAD;
- 10 - 34 CAMBRIDGE ROAD (evens);
- 65 - 97 HAWKS ROAD (odds);
- 1 - 47 PORTMAN ROAD (odds);
- 1 - 11 SOMMERSET ROAD (odds);
- 27 - 35 ROWLLS ROAD (odds);
- 11 - 27a PIPER ROAD (odds);
- 85 - 89 BONNER GILL ROAD;
- 2 - 18 VINCENT ROAD (evens);
- 57 - 61 CAMBRIDGE ROAD (odds);
- 130 - 136 GLOUCESTER ROAD (evens);
- 89 - 101 GLOUCESTER ROAD (odds);
- THE LODGE, 45 CAMBRIDGE ROAD;
- CAMBRIDGE GARDENS; and
- QUEEN MARY HALL.

6.5 Against the Maximum Parameter scheme in the ES Chapter, one rear garden is considered to experience a Moderate Adverse Affect (significant), this gardens as at :

- 134 CAMBRIDGE ROAD.

6.6 The remaining six amenity areas are considered to experience a Major Adverse Affect (significant) in the ES Chapter:

- 136 -148 CAMBRIDGE ROAD (evens); and
- CASCADIA HOUSE, CAMBRIDGE ROAD.

## SURROUNDING PROPERTIES - ILLUSTRATIVE SCHEME RESULTS

6.7 For this supplementary report GIA have considered the impact of the Illustrative scheme against the neighbouring properties to give an indication of the total impact of the future worked massing so that the neighbours are aware that their amenity is being considered by the design team with the adherence to the submitted design codes.

6.8 Against the Illustrative scheme the following 137 rear gardens and amenity areas surrounding the site will meet the BRE criteria for overshadowing and are therefore considered negligible:

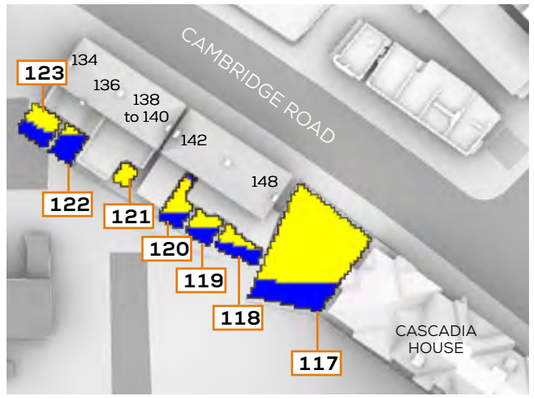
- PYRAMID COURT, 99 HAWKS ROAD;
- 10 - 34 CAMBRIDGE ROAD (evens);
- 65 - 97 HAWKS ROAD (odds);
- 1 - 47 PORTMAN ROAD (odds);
- 1 - 11 SOMMERSET ROAD (odds);
- 27 - 35 ROWLLS ROAD (odds);
- 11 - 27a PIPER ROAD (odds);
- 85 - 89 BONNER GILL ROAD;
- 2 - 18 VINCENT ROAD (evens);
- 57 - 61 CAMBRIDGE ROAD (odds);
- 130 - 136 GLOUCESTER ROAD (evens);
- 89 - 101 GLOUCESTER ROAD (odds);
- 134, 138 - 148 CAMBRIDGE ROAD (evens);
- CASCADIA HOUSE, CAMBRIDGE ROAD;
- THE LODGE, 42 CAMBRIDGE ROAD;
- CAMBRIDGE GARDENS; and
- QUEEN MARY HALL.

6.9 The remaining rear garden will experience a Minor Adverse (not significant) impact against the Illustrative scheme:

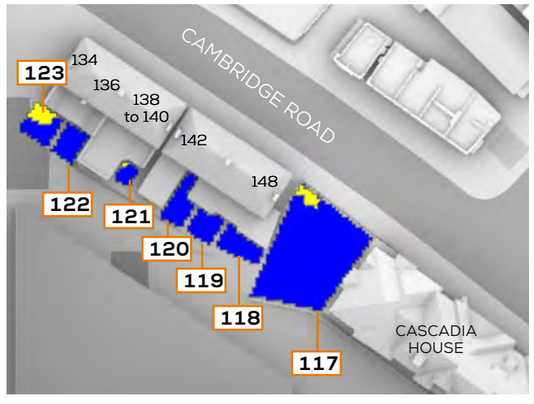
- 136 CAMBRIDGE ROAD.

6.10 As such, the assessment against the Illustrative shows that all overshadowing impacts would be not signficant. All results can be found in Appendix 04.

**Existing**



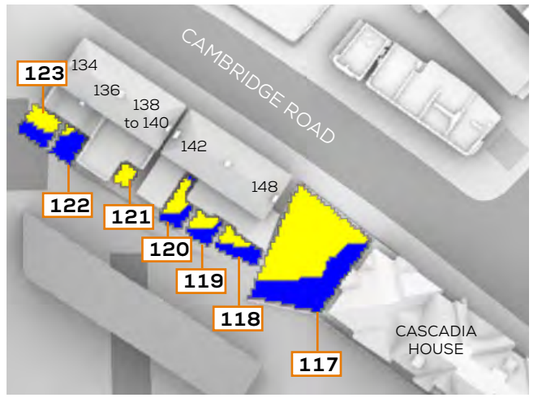

**Proposed - Maximum Parameters**




% AREA SEEING 2+ HRS OF SUNLIGHT ON 21ST MARCH

| AREA | 117 | 118 | 119 | 120 | 121 | 122 | 123 |
|---|---|---|---|---|---|---|---|
| EXISTING | 78 | 44 | 52 | 58 | 100 | 21 | 54 |
| PROPOSED | 4 | 0 | 0 | 0 | 12 | 0 | 36 |
| LOSS | 74 | 44 | 52 | 58 | 88 | 21 | 18 |
| % LOSS | 95 | 100 | 100 | 100 | 88 | 100 | 33 |

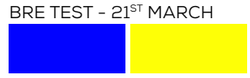
**Proposed - Illustrative Scheme**




% AREA SEEING 2+ HRS OF SUNLIGHT ON 21ST MARCH

| AREA | 117 | 118 | 119 | 120 | 121 | 122 | 123 |
|---|---|---|---|---|---|---|---|
| EXISTING | 78 | 44 | 52 | 58 | 100 | 21 | 54 |
| PROPOSED | 63 | 37 | 45 | 50 | 96 | 15 | 54 |
| LOSS | 15 | 7 | 7 | 8 | 4 | 6 | 0 |
| % LOSS | 19 | 16 | 13 | 14 | 4 | 29 | 0 |

SUN HOURS ON GROUND
BRE TEST - 21ST MARCH



# 7 CONCLUSIONS

GIA have undertaken a daylight, sunlight and overshadowing assessment in relation to the Proposed Development at Cambridge Road Estate. The technical analysis has been undertaken in accordance with the BRE Guidelines.

7.1 GIA have been instructed by Cambridge Road (RBK) LLP to provide daylight, sunlight and overshadowing advice in relation to the Cambridge Road Estate development in Royal Borough of Kingston Upon Thames. This report is intended to provide details of the impacts to the neighbouring properties and amenity areas that would arise from the Illustrative Scheme. The ES Chapter 9 sets out the maximum parameters and presents the "worse case scenario". This Report is intended to demonstrate the impacts of the scheme that is likely to come forward at the detailed design stages through the application of the design codes and that in the majority of circumstances the worst case scenario discussed in Chapter 9 of the ES is unlikely to be reached.

7.2 When constructing buildings in an urban environment, alterations in daylight and sunlight to adjoining properties are often unavoidable. The numerical guidance given in the BRE document should be treated flexibly, especially in dense urban environments.

7.3 Our technical analysis shows that following the implementation of the Proposed Illustrative scheme, there are significant improvements to the impacts created by the Max Parameter scheme which is assessed and discussed as part of Chapter 9 of the Environmental Statement.

7.4 The assessment against the hybrid scheme as part of the ES Chapter is a worst case scenario of block massing which will never be built out. This assessment demonstrates that the design team have taken care in considering the potential impact to the neighbouring properties in that separation distances are increased, height and mass is decreased within the blocks submitted for planning and spaces have been created between proposed blocks to allow for great access to daylight and sunlight to the neighbouring properties.

7.5 Of the 150 properties assessed against the Illustrative scheme, 136 (90.6%) will experience either a Negligible or Minor adverse impact. The majority of the remaining properties discussed in this report will likely retain daylight levels which would be considered acceptable for this area which is earmarked for such needed higher density housing and regeneration.

7.6 Of the 138 amenity areas assessed for overshadowing, against the Illustrative scheme, 137 (99%) will experience Negligible impacts whilst the remaining amenity area experiences a Minor adverse impacts. As such, the impact of the Illustrative scheme in terms of overshadowing is considered not significant.

7.7 In reviewing this report it is important to note that daylight and sunlight is only one consideration when reviewing the amenity of neighbours as a result of the proposed scheme. As such, GIA would urge that the daylight and sunlight impacts should not be viewed in isolation, and instead should be considered on the wider planning balance. The rigid application of BRE Guidelines does not create sufficient flexibility for higher density housing and development, which is greatly needed in London. A position supported by the Mayor via the Greater London Authority (GLA) in their SPG for Housing and each of the respective boroughs in their local plans.

7.8 In our capacity as daylight consultants on an extensive number of London developments, it is our considered view that from a daylighting and sunlight perspective the scheme appears in keeping with the proposed densification and context of the Kingston area and the emerging policies on density and regeneration.

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