

**DAYLIGHT/SUNLIGHT  
&  
OVERSHADOWING  
ANALYSIS**

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*Wp ref:* 21DLRB

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**DAYLIGHT ANALYSIS**

**AMENITY ANALYSIS**

# DAYLIGHT/SUNLIGHT & OVERSHADOWING ANALYSIS

*in connection with the proposed development at*

## BEST COURT 119 EAST ROAD LONDON E15 3QS

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### EXECUTIVE SUMMARY

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- 1.1 This Report has been commissioned to address the Pre-App request of the London Borough of Newham whether the proposals to Best Court 119 East Road London E15 3QS will have any effect upon the daylight/sunlight of the adjoining properties having regard to *BRE Second Edition 2011*.
- 1.2 The proposals considered are the e for the construction of 8nr new residential units on the site of Best Court and their effect upon the daylight/sunlight to 91-115 East Road and 25-33 Brooks Road.
- 1.3 The appropriate drawings are those prepared by Messrs. McBrien-Thomas
- 1.4 Following the publication of the information paper entitled "*Site Layout planning for daylight and sunlight: A guide to good practice*" by the *Building Research Establishment* in 1991, the assessment of daylight and sunlight has been generally carried out in accordance with the criteria set by this publication and which is generally taken to be the accepted basis for such assessment and adopted by most Planning Authorities. This publication has been superseded by the *Second Edition* issued *October 2011*. The *BRE Second Edition 2011* does give numerical guidelines, but recommends that these should be interpreted flexibly. Paragraph 1.6 of the *BRE Second Edition 2011* states in entirety '*The guide is intended for building designers and their clients, consultants and planning officials. The advice given here (sic BRE Second Edition 2011) is not mandatory and the guide should not be an instrument of planning policy; its aim is to help rather than constrain the designer. Although it gives numerical guidelines, these should be interpreted flexibly since natural lighting is only one of many factors in site layout design. In special circumstances the developer or planning authority may wish to use different target values. For example, in a historic city centre, or on an area with modern high-rise buildings, a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings. Alternatively, where natural light is of special importance in a building less obstruction and hence more sunlight and daylight may be deemed necessary. The calculation methods in Appendices A, B and G are entirely flexible in this regard. Appendix F gives advice on how to develop a consistent set of target values for skylight under such circumstances, and Appendix C shows how to relate these to interior daylighting requirements.*

- 1.5 The criteria against which the effect upon daylight/sunlight is considered is detailed within *Appendix A* of the *BRE Second Edition 2011* and the analysis confirms compliance with guidance.
- 1.6 The criteria against which the effect upon sun on ground (overshadowing) is considered is detailed within *Appendix G* of the *BRE Second Edition 2011* and the analysis confirms compliance with guidance.
- 1.7 It is my Expert opinion that the proposals, as demonstrated by the analysis, accord with guidance of the *Building Research Establishment* document "*Site Layout planning for daylight and sunlight: A guide to good practice*" *Second Edition 2011* having regard to *Appendix A* and *Appendix G* of the aforesaid guidance and therefore should also comply with any Planning Authority requirements.

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## INTRODUCTION

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- 2.1 This Report has been commissioned to address the Pre-App request of the London Borough of Newham whether the proposals to Best Court 119 East Road London E15 3QS will have any effect upon the daylight/sunlight of the adjoining properties having regard to *BRE Second Edition 2011*.
- 2.2 I would confirm that I am a Chartered Building Surveyor working predominately in the field of rights of light including daylight and sunlight assessments. I have an extensive and highly specialised knowledge, in these areas having worked in the past for both Anstey Horne & Co. for five years and Schatunowski Brooks (formerly known as Michael Brooks Associates as it was when I joined, then known as GVA Schatunowski Brooks and now part of Avison Young) for three years, as well as Delva Patman Associates - now known as Delva Patman Redler LLP - for four years prior to joining in Partnership Dixon Payne in 2001. All are acknowledged Experts in these fields; I now act under my own banner.
- 2.3 I regularly provide Expert Witness advice in respect of Planning Applications in respect of daylight and sunlight at Planning Inquiries acting for both Appellants and Planning Authorities. I was consulted by the *Building Research Establishment* prior to the revision of their guidelines in 2011 and am part of the further consultation about further revisions currently being considered following the publication of *BS EN 17037:2018*.
- 2.4 The analysis and assessments are described in more detail in subsequent sections of this Report.
- 2.5 The proposals considered are the e for the construction of 8nr new residential units on the site of Best Court and their effect upon the daylight/sunlight to 91-115 East Road and 25-33 Brooks Road.
- 2.6 For the detailed technical analysis, in accordance with the *BRE Second Edition 2011*, I have used the 3D model of the proposals and surrounding properties produced by Messrs. McBrien-Thomas and utilised specialist computer programmes.

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## DAYLIGHT/SUNLIGHT ANALYSIS

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- 3.1 Following the publication of the information paper entitled "*Site Layout planning for daylight and sunlight: A guide to good practice*" by the *Building Research Establishment* in 1991, the assessment of daylight and sunlight has been generally carried out in accordance with the criteria set by this publication and which is generally taken to be the accepted basis for such assessment and adopted by most Planning Authorities. This publication has been superseded by the *Second Edition* issued *October 2011*. The *BRE Second Edition 2011* does give numerical guidelines, but recommends that these should be interpreted flexibly. Paragraph 1.6 of the *BRE Second Edition 2011* states in entirety '*The guide is intended for building designers and their clients, consultants and planning officials. The advice given here (sic BRE Second Edition 2011) is not mandatory and the guide should not be an instrument of planning policy; its aim is to help rather than constrain the designer. Although it gives numerical guidelines, these should be interpreted flexibly since natural lighting is only one of many factors in site layout design. In special circumstances the developer or planning authority may wish to use different target values. For example, in a historic city centre, or on an area with modern high-rise buildings, a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings. Alternatively, where natural light is of special importance in a building less obstruction and hence more sunlight and daylight may be deemed necessary. The calculation methods in Appendices A, B and G are entirely flexible in this regard. Appendix F gives advice on how to develop a consistent set of target values for skylight under such circumstances, and Appendix C shows how to relate these to interior daylighting requirements.*'
- 3.2 The criteria against which the effect upon daylight/sunlight is considered is detailed within *Appendix A* of the *BRE Second Edition 2011*.
- 3.3 The primary assessment of daylight is based on the calculation of the vertical sky component (VSC) to an affected window in both the existing and proposed condition. The VSC, simply put, is the amount of light received at the centre of a window.
- 3.4 The *BRE Second Edition 2011* states that this assessment should be undertaken for habitable rooms that include living rooms, dining rooms and kitchens. Windows to bathrooms, toilets, storerooms and circulation areas need not be analysed.
- 3.5 The advised procedure to follow is to ascertain whether a new development will have an effect upon daylight or sunlight of adjacent residential properties is to determine whether the proposals subtends a line drawn at 25° to the horizontal from the centre of an affected window of an adjacent property. If the whole of the development is below this line then it is unlikely that the proposals will have a substantial effect on the skylight or daylight enjoyed by the existing building.

- 3.6 The primary assessment of daylight is based on the calculation of the vertical sky component (VSC) to an affected window in both the existing and proposed condition. The VSC, simply put, is the amount of light received at the centre of a window with the maximum that can be received on a vertical face being 39.6%. It does not indicate distribution within a room for which other assessments are required. The guide states that if at the centre of a window the VSC is greater than 27% of the visible dome then enough skylight should be reaching the window.
- 3.7 This said, a VSC of 27% is the ideal, but in most urban situations unlikely to be achieved. The guide states, however, that if the VSC is below 27%, and as long as any reduction is within 0.8 of the original value, no significant loss will occur (a reduction which is deemed to be of no consequence and not readily identifiable).
- 3.8 In respect of sunlight, the guide details the assessment of this by way of calculating the number of probable sunlight hours. Probable sunlight hours take into account the total number of hours a year that the sun is expected to shine taking into account average levels of cloud cover for the geographical location. Only windows which face within 90° of south meet the criteria for assessment.
- 3.9 The orientation of a window is important when considering sunlight. A south facing window, generally, will receive the most sunlight whilst east and west facing windows will only receive sunlight at certain times of the day with a maximum of 50% of annual probable hours available even in an unobscured aspect. A north facing window will only receive sunlight on a very few occasions during early morning and late evening in summer.
- 3.10 Using specialist computer programmes, calculated the quantum of daylight received to the affected adjacent residential properties by way of facade analysis.
- 3.11 In respect of the assessment of façades to East Road and Brooks Road, the daylight analysis demonstrates that the majority of the whole façades, 97%, will not have an effect which is discernible to the human eye; more than 60% of the assessed façades have a VSC in excess of 27% - a VSC deemed acceptable in any circumstance – with 87.5% of the assessed façades having VSCs in excess of 20% VSC.
- 3.12 With regard to the sunlight analysis, only the façades to the East Road properties meet the criteria for analysis; the analysis confirms that there will be no discernible effect upon either annual sunlight received or the winter sun received.

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## OVERSHADOWING

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4.01 In respect of sun on ground (overshadowing), the advice of the *BRE Second Edition 2011* is:-

*3.3.17 It is recommended that for it to appear adequately sunlit throughout the year, at least half of a garden or amenity area shall receive at least two hours of sunlight on 21 March. If as a result of a new development an existing garden or amenity area does not mean the above, and the area which can receive two hours of sun on March 21 is less than 0.8 times its former value, then the loss of sunlight is likely to be noticeable*

4.02 The technical analysis demonstrates that any reduction in area receiving 2 hours of sun on March 21 is less than 20% of the original quantum and therefore this reduction is not likely to be noticeable.

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## CONCLUSION

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- 5.1 Following the publication of the information paper entitled "*Site Layout planning for daylight and sunlight: A guide to good practice*" by the *Building Research Establishment* in 1991, the assessment of daylight and sunlight has been generally carried out in accordance with the criteria set by this publication and which is generally taken to be the accepted basis for such assessment and adopted by most Planning Authorities. This publication has been superseded by the *Second Edition* issued *October 2011*. The *BRE Second Edition 2011* does give numerical guidelines, but recommends that these should be interpreted flexibly. Paragraph 1.6 of the *BRE Second Edition 2011* states in entirety *"The guide is intended for building designers and their clients, consultants and planning officials. The advice given here (sic BRE Second Edition 2011) is not mandatory and the guide should not be an instrument of planning policy; its aim is to help rather than constrain the designer. Although it gives numerical guidelines, these should be interpreted flexibly since natural lighting is only one of many factors in site layout design. In special circumstances the developer or planning authority may wish to use different target values. For example, in a historic city centre, or on an area with modern high-rise buildings, a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings. Alternatively, where natural light is of special importance in a building less obstruction and hence more sunlight and daylight may be deemed necessary. The calculation methods in Appendices A, B and G are entirely flexible in this regard. Appendix F gives advice on how to develop a consistent set of target values for skylight under such circumstances, and Appendix C shows how to relate these to interior daylighting requirements.*
- 5.2 The technical analysis, carried out in accordance with *Appendix A* of the *Building Research Establishment* Guidance "*Site Layout planning for daylight and sunlight: A guide to good practice*" *Second Edition* issued *October 2011*, confirms that the proposals will have no substantive effects upon other adjoining properties' daylight/sunlight.
- 5.3 The technical analysis, carried out in accordance with *Appendix G* of the *Building Research Establishment* Guidance "*Site Layout planning for daylight and sunlight: A guide to good practice*" *Second Edition* issued *October 2011* demonstrates that any reduction in area receiving 2 hours of sun on March 21 is less than 20% of the original quantum and therefore this reduction is not likely to be noticeable.

- 5.3 It is my Expert opinion that the proposals, as demonstrated by the analysis, accord with guidance of the *Building Research Establishment* document "*Site Layout planning for daylight and sunlight: A guide to good practice*" *Second Edition 2011* having regard to *Appendix A* of the aforestated guidance and therefore should also comply with any Planning Authority requirements.

July 27, 2021

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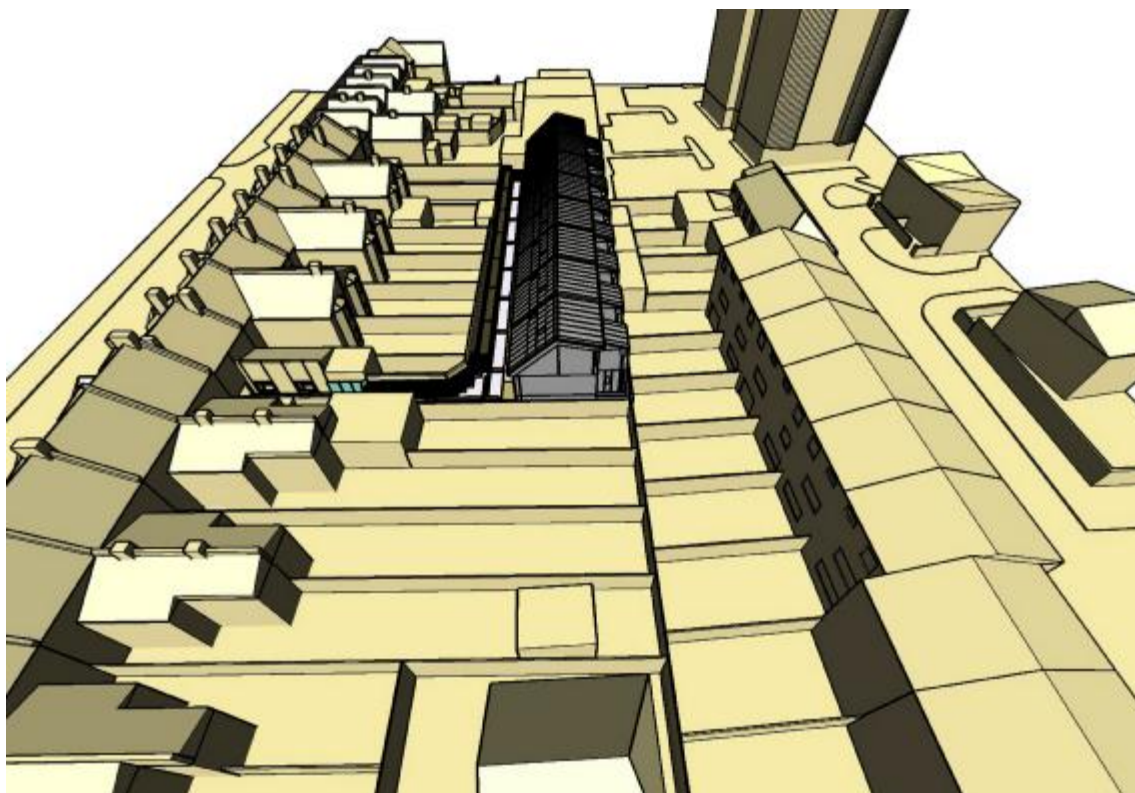
## APPENDICES

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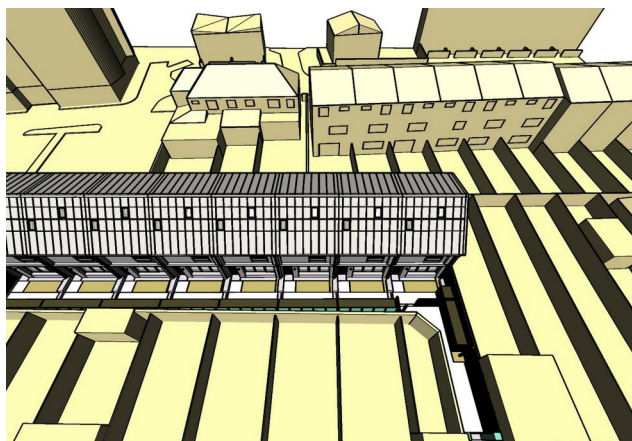
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BEST COURT 119 EAST ROAD  
LONDON E15 3QS  
3D VIEWS



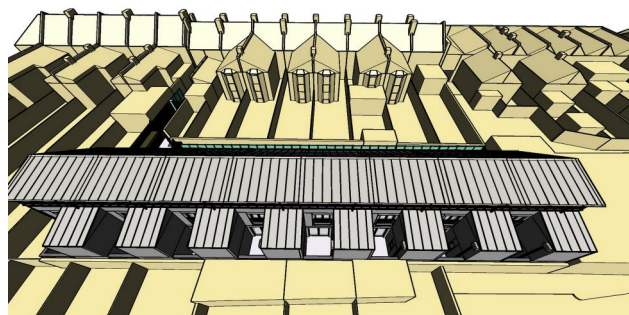
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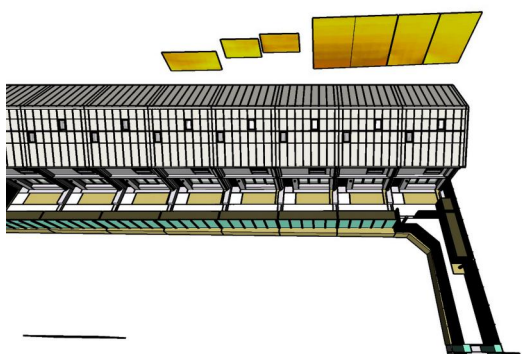
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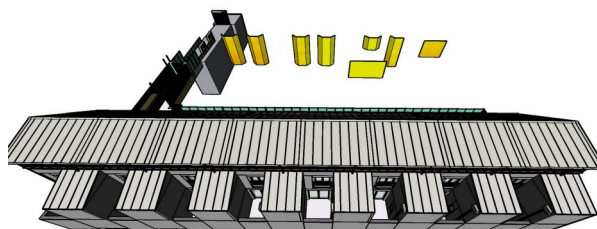
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Facade Analysis 2

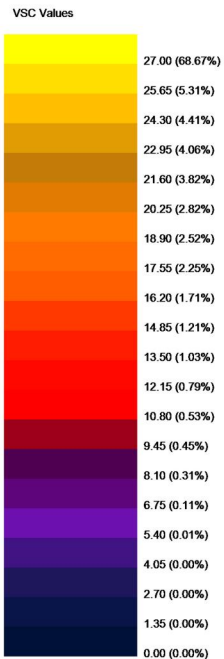


Facade Analysis 1 Results

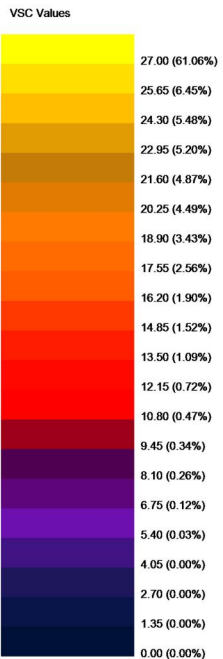


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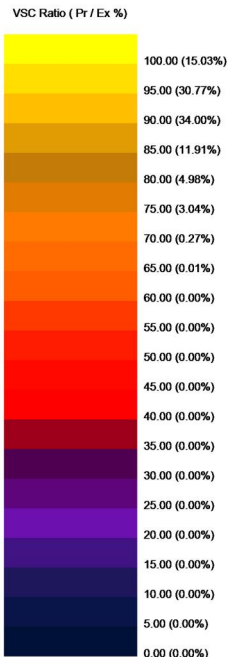
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3D VIEWS



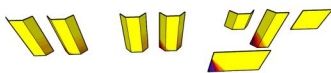
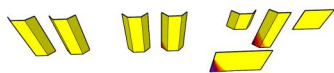
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VSC\_PROPOSED\_Legend\_Facade



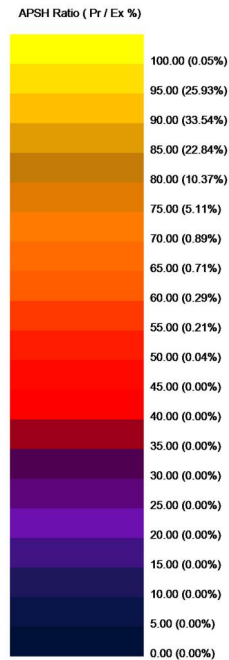
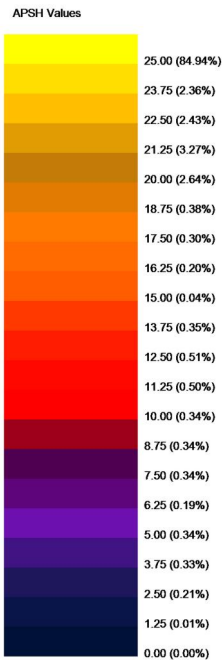
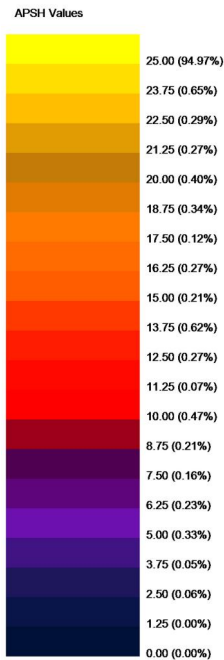
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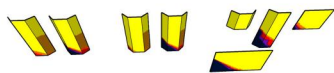


APSH Facade Existing

APSH Facade Proposed

APSH Facade Ratio

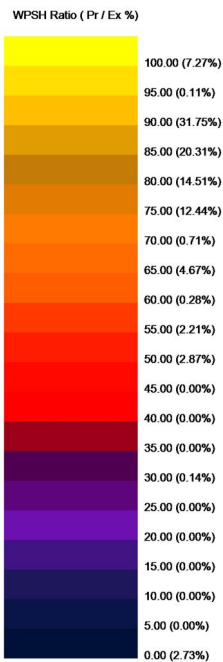
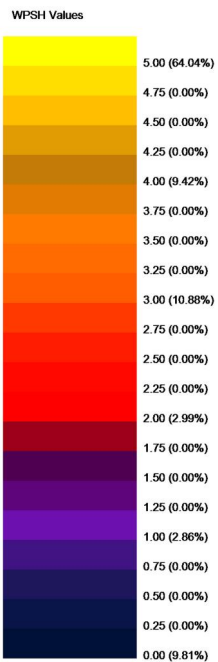
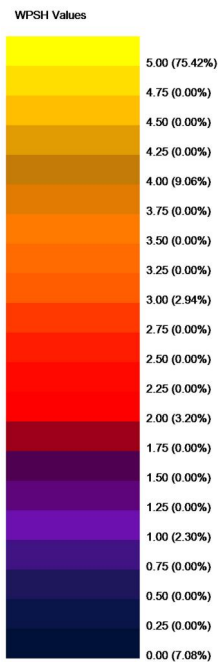


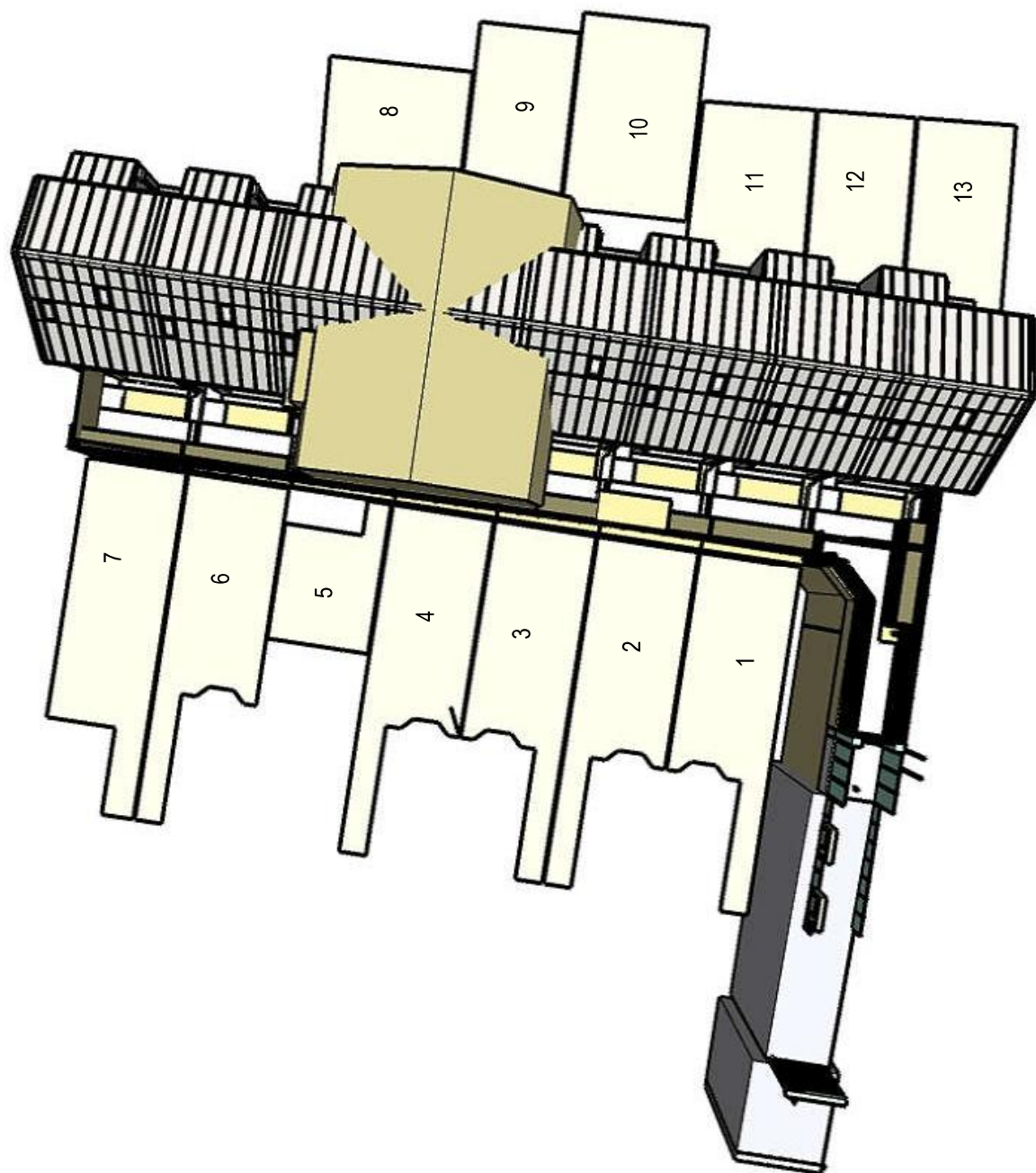


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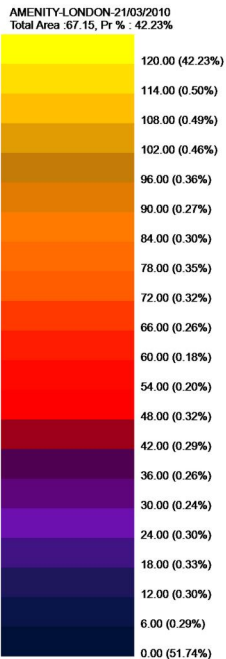
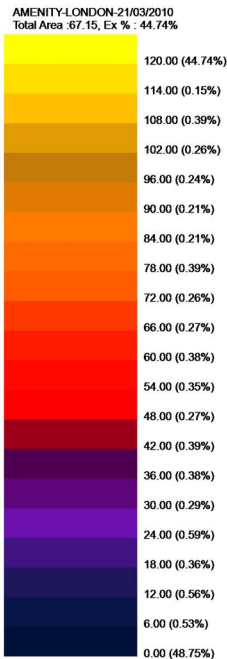
WPSH Facade Proposed

WPSH Facade Ratio



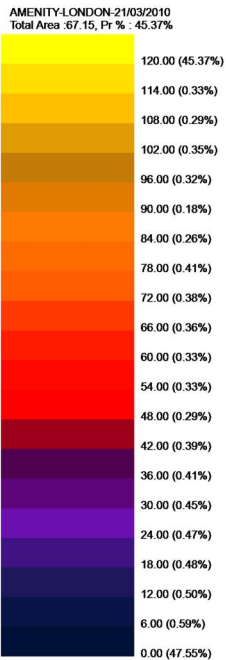
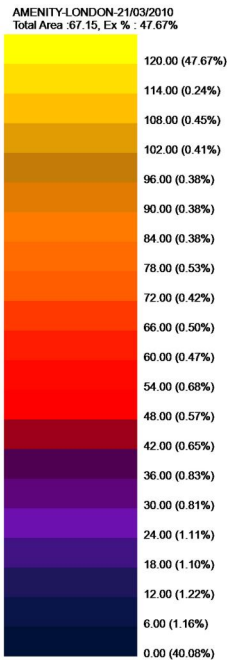


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AMENITY ANALYSIS



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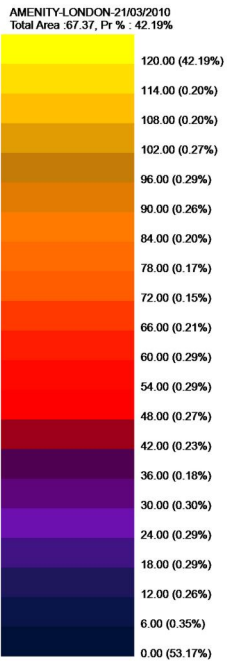
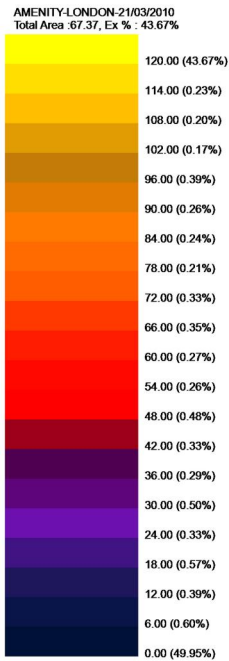
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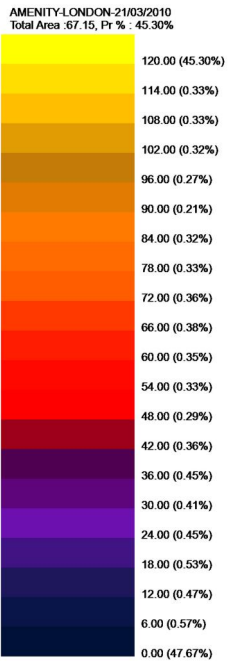
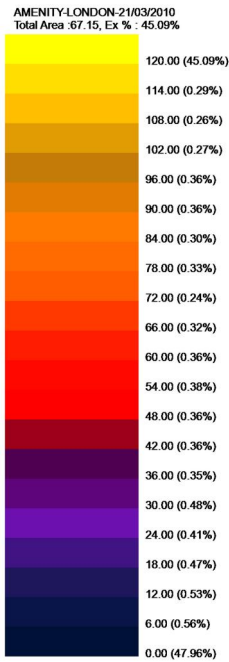
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AMENITY ANALYSIS



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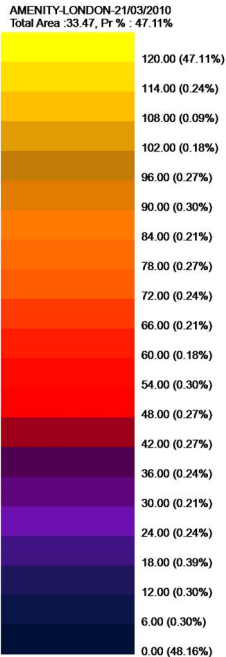
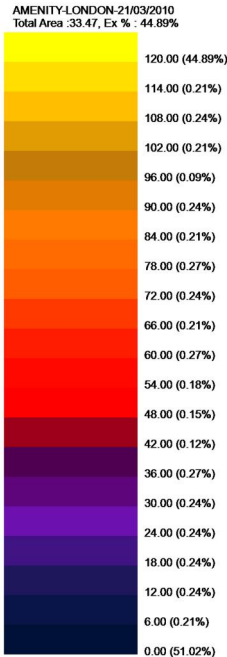
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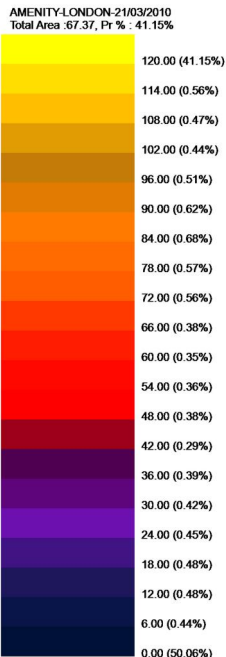
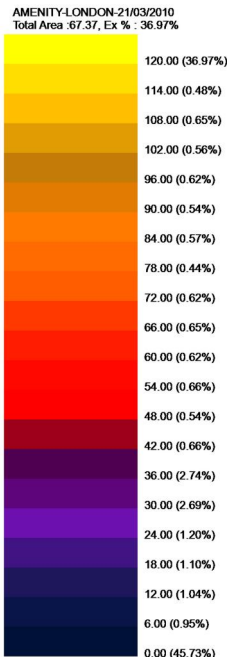
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AMENITY ANALYSIS



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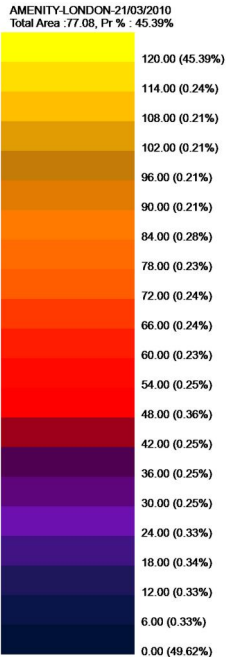
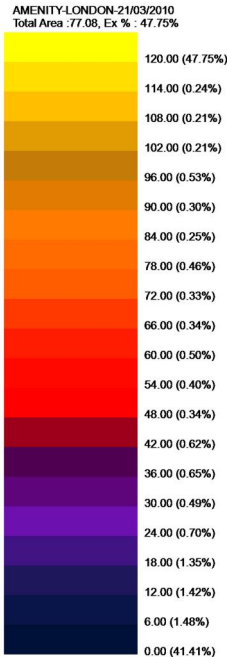
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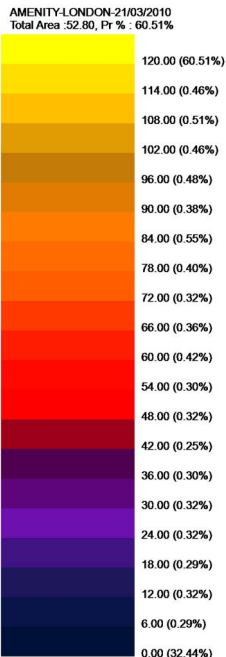
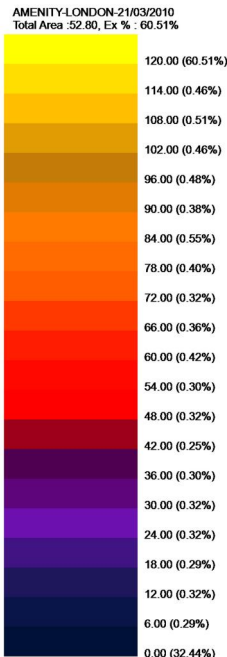
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AMENITY ANALYSIS



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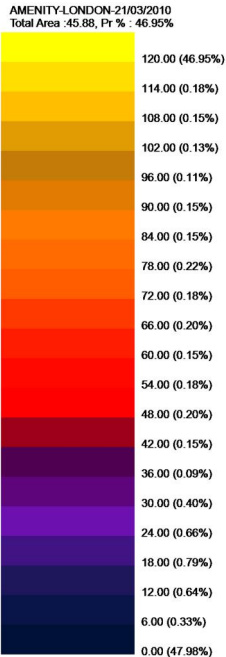
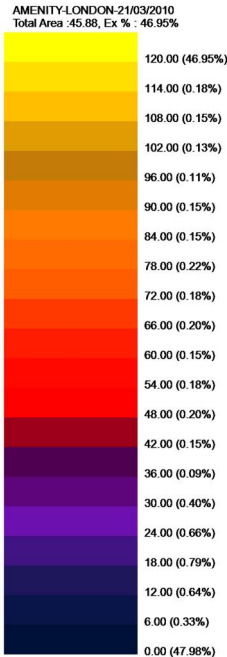
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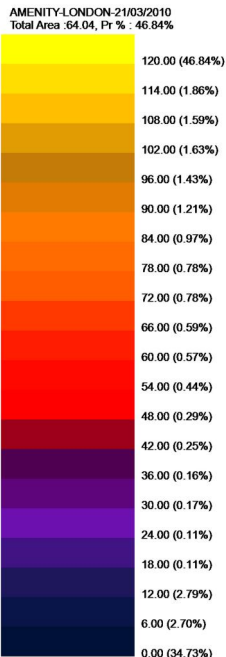
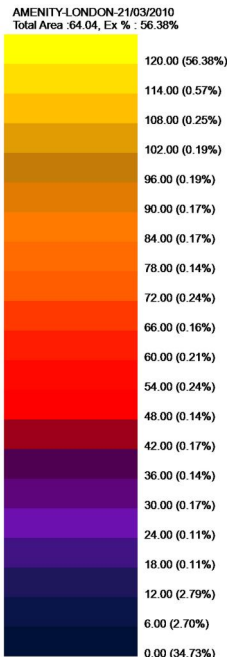
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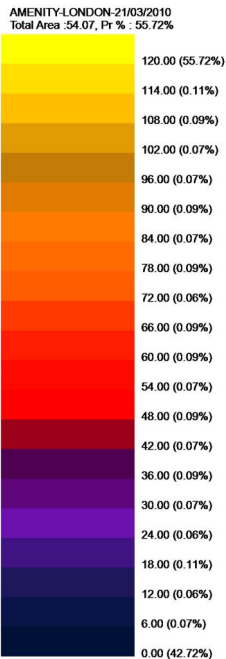
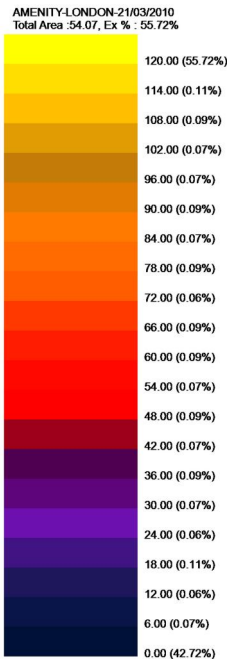
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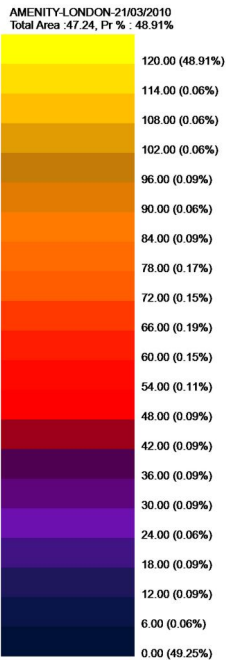
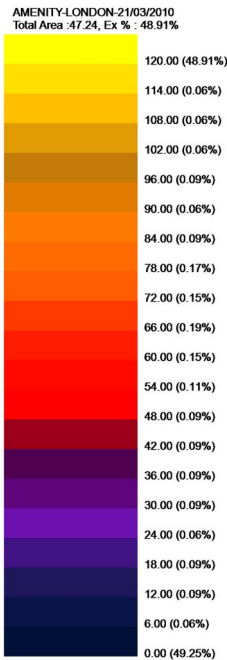
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AMENITY ANALYSIS



AMENITY\_EXISTING\_Legend\_Amenity 11

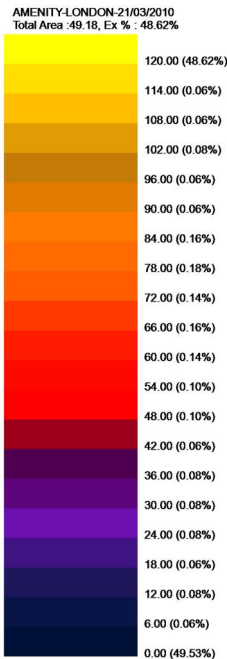
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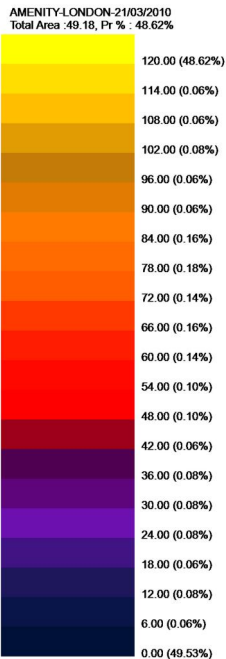
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AMENITY ANALYSIS



AMENITY\_EXISTING\_Legend\_Amenity 13



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