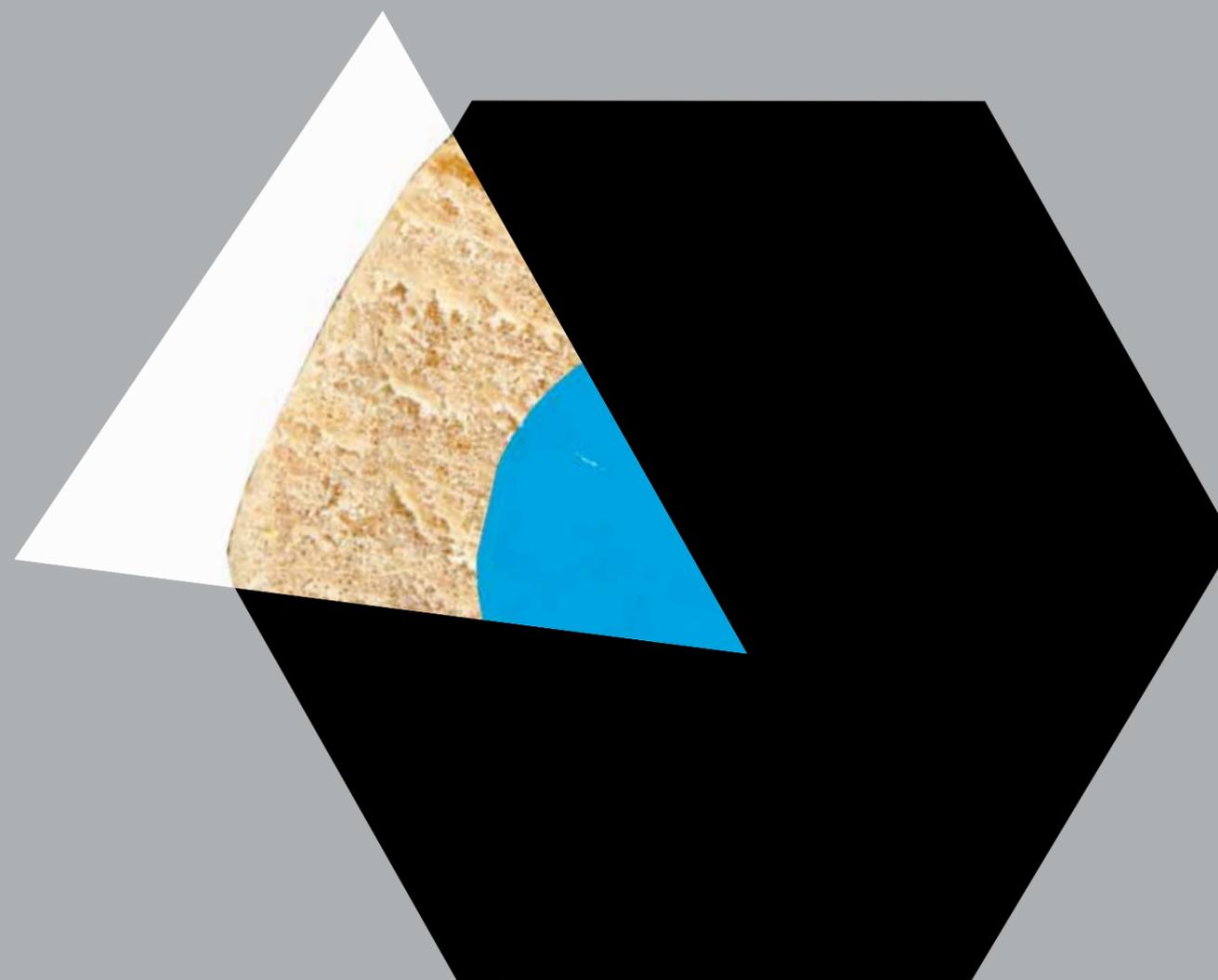


London Borough of Lambeth
Westminster World Heritage Site Setting Study

September 2018



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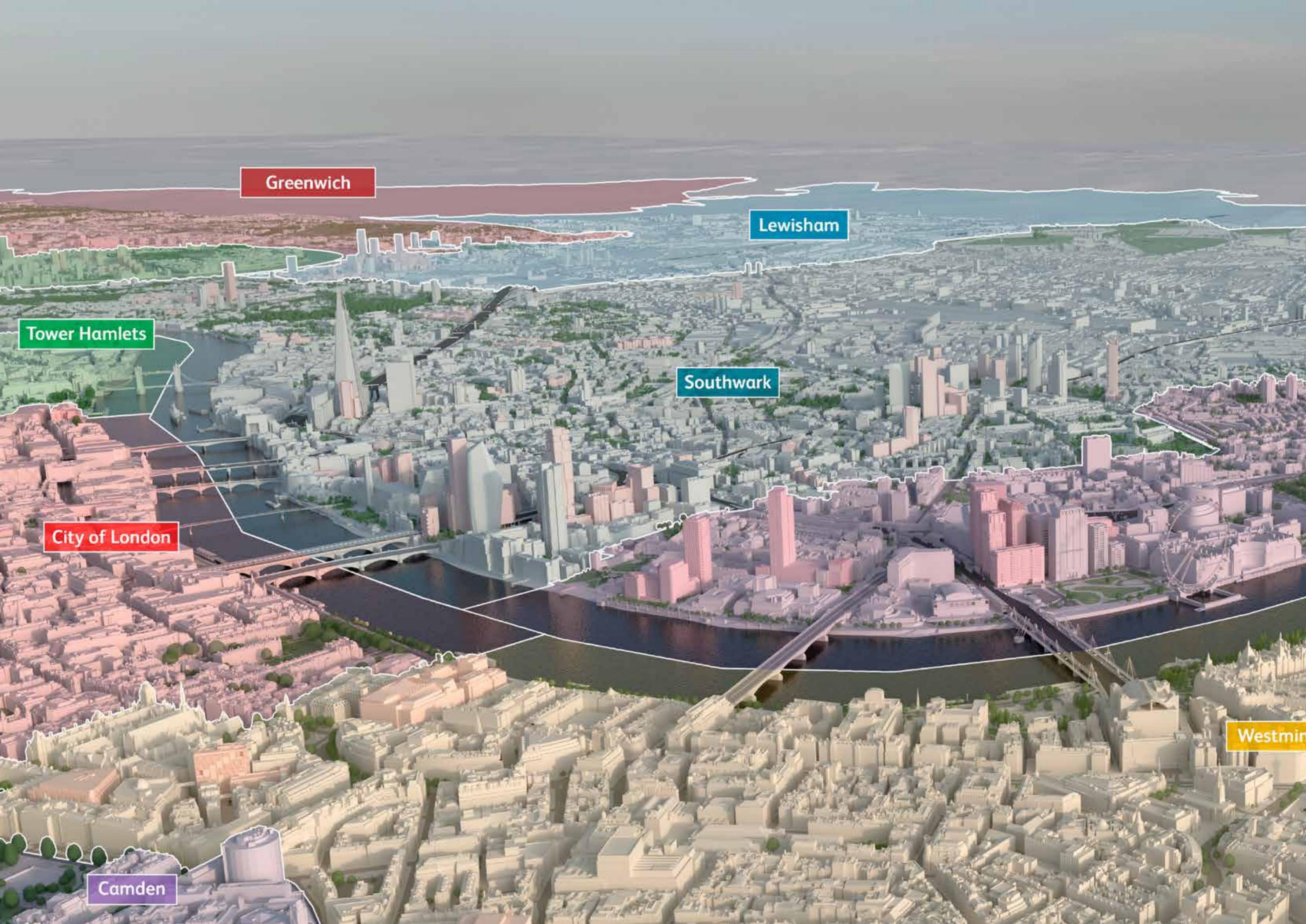
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Greenwich

Lewisham

Tower Hamlets

Southwark

City of London

Camden

Westmin



1 Introduction

1.1 This report documents a series of studies commissioned by the London Borough of Lambeth, carried out over the past two years. These studies have included:

- A Zone of Visual Influence Analysis to understand the visibility of the Westminster World Heritage Site (WWHS). This work was designed to inform Lambeth's work on the mapping of an 'immediate setting' for the WHS site from within the London Borough of Lambeth.
- Generating a three-dimensional analysis of the combined effects of various LVMF policies that constrain development in the 'wider setting' of the WWHS.
- Overlaying other material planning considerations with a view to developing a comprehensive set of height constraints around the WWHS, in response to concerns raised by the UNESCO Missions of 2011 and 2017.

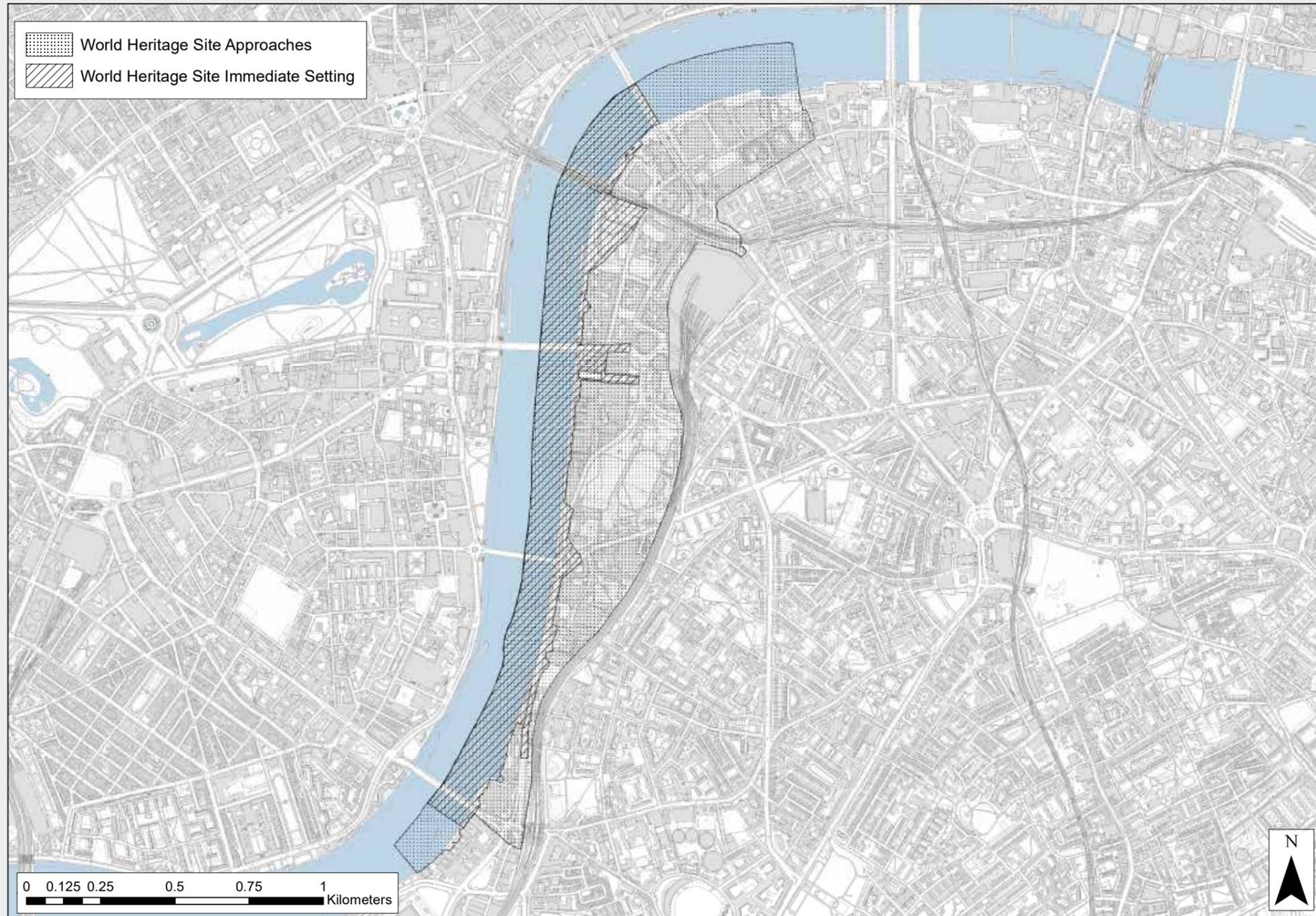
2 Westminster World Heritage Site - Zone of Visual Influence

- 2.1 During the 2011 UNESCO Mission to the Westminster World Heritage Site concerns were raised about the impact of recent and proposed development on the immediate and wider setting of the WHS. Following the Mission, UNESCO requested that further work be undertaken in this area.
- 2.2 As a response to UNESCO's concerns, Lambeth instigated its own research to help inform local policies. From the outset, LBL has shared its investigations with other stakeholders, in particular through activities of the WWHS Steering Group.
- 2.3 The Zone of Visual Influence study uses the method of 'shadow casting' whereby light sources are placed on the outer surfaces of a computer model of the Palace of Westminster. These lights then cast shadows onto a plane representing average pedestrian eye height. From these shadows, diagrams of visibility are created. The technique does not quantify the amount of the test building that can be seen, it simply identifies those areas where at least some part is likely to be visible.
- 2.4 This study only takes into account occlusion by built elements. Trees are treated as entirely transparent. This tends to over-express visibility within public open spaces such as parks.
- 2.5 The analysis makes a distinction between areas from which the general roofline of the Palace is visible and areas from which only one or other of the principal towers can be seen.
- 2.6 These diagrams illustrate that that visibility of the Palace of Westminster is fairly limited from within Lambeth, with the principal areas being the River banks and bridges. Where the WWHS is visible from public open spaces within the borough at a distance from the River visibility will be further reduced by tree cover as noted above.



Zone of Visual Influence analysis of the WWHS to help define the immediate setting of the WWHS

3 World Heritage Site Immediate Setting and Approaches



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- 3.1 Armed with Zone of Visual Influence analysis prepared by Millerhare Lambeth was able to carry out focused field assessments to assess the subjective quality of views toward the WHS. These considered in particular locations related to public transport hubs and the flows of visitors from these towards the World Heritage Site.
- 3.2 The Zone of Visual Influence analysis has allowed an immediate setting to the WHS within Lambeth to be mapped. This has been defined as any publicly accessible place within Lambeth (including the River Thames) where the viewer can gain a good visual appreciation of the WHS.
- 3.3 This work was shared with WWHS Stakeholders and the ICOMOS 2017 Mission as part of Lambeth's commitment to the management of the wider setting of the WHS that fall within the Borough boundary.
- 3.4 The approaches include the immediate setting and a wider hinterland linking to the main transport interchanges at Vauxhall and Waterloo from which many visitors to the WHS arrive. The approaches have been mapped to allow for their better management. For example, in advance of the 2017 Mission, in order to enhance some of the most heavily visited areas that provide views of the Palace of Westminster a de-cluttering project was undertaken in partnership with TfL to improve the public realm along the Albert Embankment.
- 3.5 In defining a wider setting it was concluded that the area falling behind the World Heritage Site in views from within the immediate setting could reasonably be considered as the 'wider setting' for the purposes of the concern raised by UNESCO in 2011. Using the immediate setting map, it was possible to identify that the wider setting generally in views from Lambeth falls within the City of Westminster (views west from Waterloo) and Camden (views north from Vauxhall).
- 3.6 Further digital modelling was then undertaken at Lambeth's request to help develop an understanding of existing planning constraints affecting the wider setting which related to the World Heritage Site. The best starting point was considered to be the LVMF Protected Silhouette policies.

4 Westminster World Heritage Site: Statutory View Protection

Defining the Wider Setting of the WWHS

4.1 Having defined the immediate setting of the Westminster World Heritage Site within the London Borough of Lambeth, it becomes straightforward to define the 'wider setting' of the WHS from within the Borough as being those areas that either fall behind or are seen alongside the buildings of the WHS, these include:

- views toward the City of Westminster (looking west from Waterloo)
- views toward Camden (looking north from Vauxhall).

4.2 In order to develop an understanding of existing planning constraints affecting this wider setting, Lambeth commissioned further model-based analysis to help understand where existing policies help to ensure that harmful development cannot impact on views from Lambeth toward the World Heritage Site.

4.3 This work was carried out as 3 progressive cases which each took account of additional factors:

- Case 1: the effect of geometrically defined LVMF Protected Silhouettes and foreground Viewing Corridors, both of which define specific height constraints above which development will be automatically refused
- Case 2: adding in effects of other LVMF policies that constrain development in views from or toward the WHS, these include in particular the Wider Setting Consultation Areas that form part of each Protected Vista
- Case 3: adding qualitative policies from the LVMF and policies from other sources that help define the protection of the WHS 'in the round'. In this assessment the analysis tried to reflect the operational effectiveness of these additional policies with account being taken of planning decisions in the past 10 years. Such decisions have, in effect, encapsulated the current interpretation of the qualitative guidance provided by the LVMF, Conservation Area, Listed Building and Local Plan policies.

4.4 The most important protection policies with regard to views from Lambeth form part of Case 1. To understand how these operate it is important to understand the cumulative effects of a series of overlapping Management Plans for Viewing Locations close to the WWHS, the majority of which lie within the London Borough of Lambeth. These have been developed under the London Plan policies that underpin the London View Management Framework.



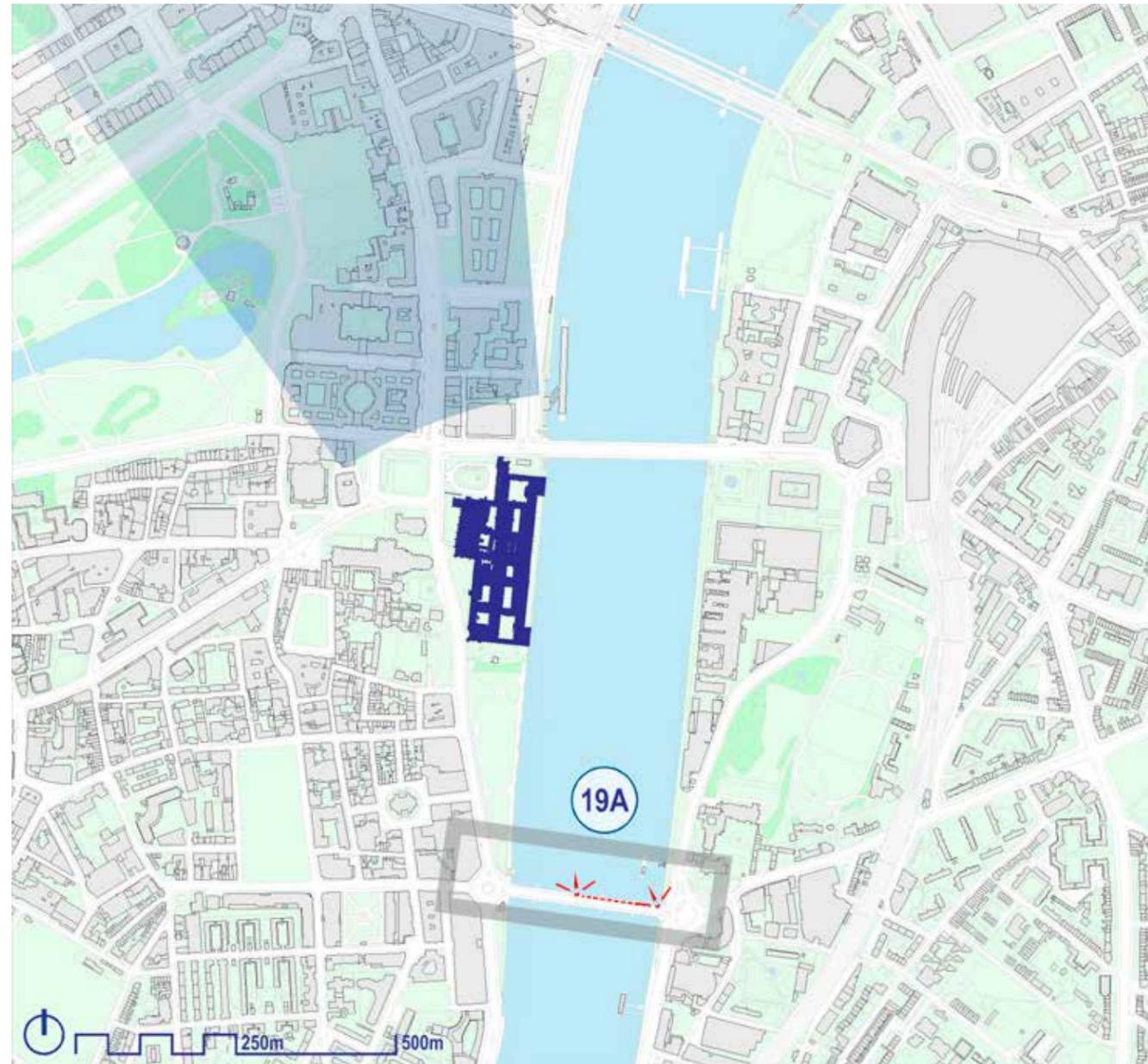
LONDON VIEW MANAGEMENT FRAMEWORK SUPPLEMENTARY PLANNING GUIDANCE

MARCH 2012
LONDON PLAN 2011
IMPLEMENTATION FRAMEWORK

MAYOR OF LONDON

LVMF Protected Silhouette Policies

- 4.5 London Plan Policy 7.12 grants the Mayor authority to select views where the skyline silhouette of a World Heritage Site should be protected from additional background development. Since the 2012 edition of the LVMF, Protected Silhouette policy has been applied to a group of viewing locations within the River Prospects close to the WWHS and to one of the Townscape Views from Parliament Square.
- 4.6 Where a Protected Silhouette has been defined, the Management Plan for a Viewing Location includes panoramic photographs from the relevant Assessment Points annotated to highlight the extent of the World Heritage Site to which the policy applies. The plan area affected by this constraint is illustrated in the initial view of each Management Plan.
- 4.7 In all cases where a Protected Silhouette has been defined, the plan of the Viewing Location includes a dotted line linking two or more Assessment Points. This indicates that the Protected Silhouette is to be tested kinetically between the Assessment Points, with any location along this line being subject to the same requirement to avoid changes to the skyline silhouette of the defined sections of the World Heritage Site.



LVMF View 19A: Lambeth Bridge. Two linked assessment points are dotted red while the plan area of the World Heritage Site to which the Protected Silhouette policy applies is shown in dark blue.



Panorama from Assessment Point 19A.1 Lambeth Bridge: downstream – at the centre of the bridge

Modelling Protected Silhouette Constraints

- 4.8 In order to understand the implication of the current view constraints, Millerhare have created three-dimensional computer models related to each Protected Silhouette. These models identify a surface which corresponds to the limit of visibility from the designated Viewing Location. Development that does not exceed this surface would remain invisible from the designated Assessment Point and at all positions along the path that links them and therefore such development can be judged acceptable in terms of the LVMF guidance.
- 4.9 The modelling work has been developed using the methodology shown overleaf:

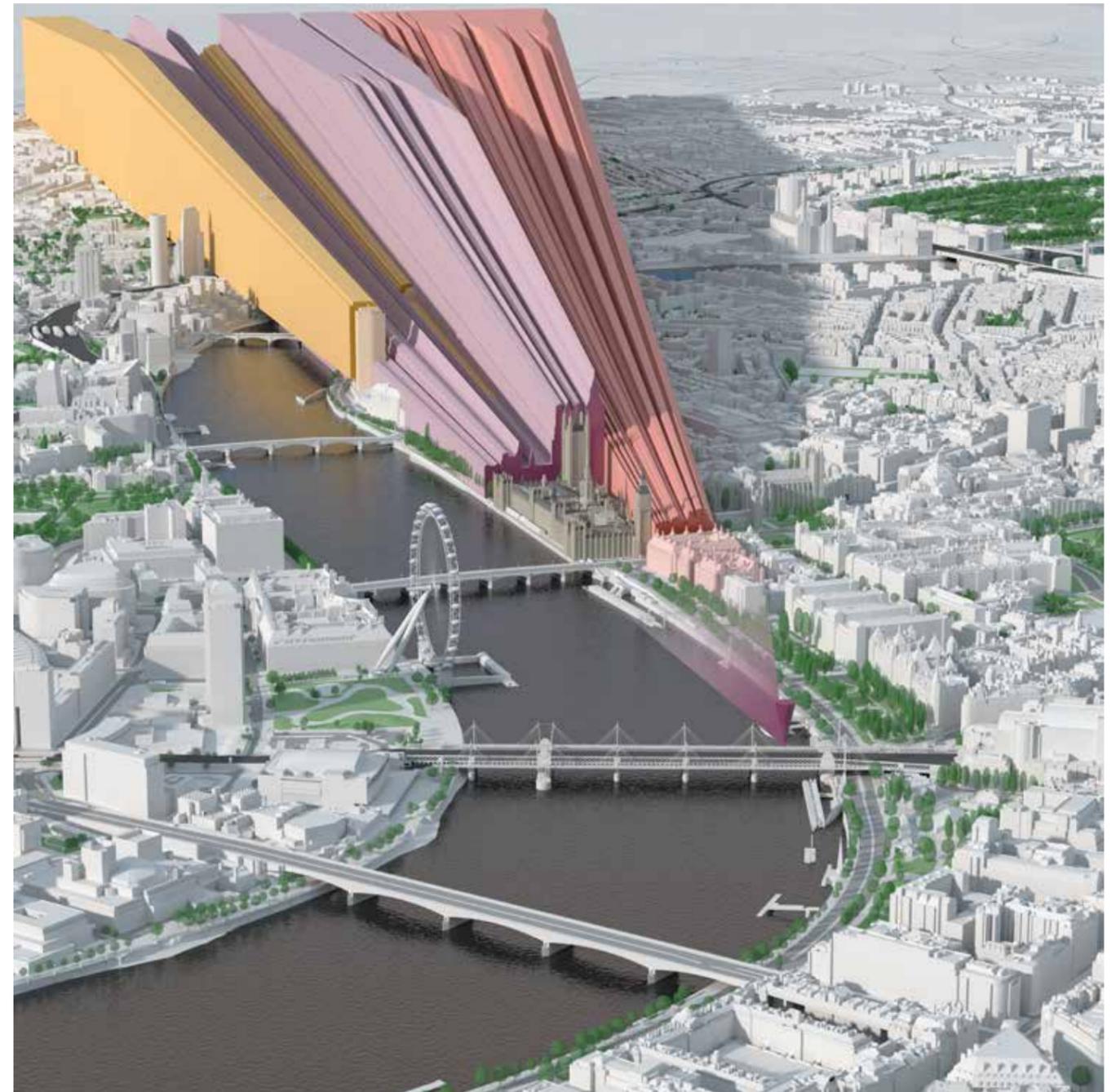
Modelling the constraints from a fixed point

4.10 For each Assessment Point included in the study, a 3D model was constructed that reflects the a line of sight projection of the current silhouette of the WWHS. In all cases the resulting forms have been truncated at a height of 300m AOD to respect the CAA flight paths, however in practice this limit would rarely be practical in terms of land use and value and would, in any event, be subject to many other constraints that have not been considered by the present study.



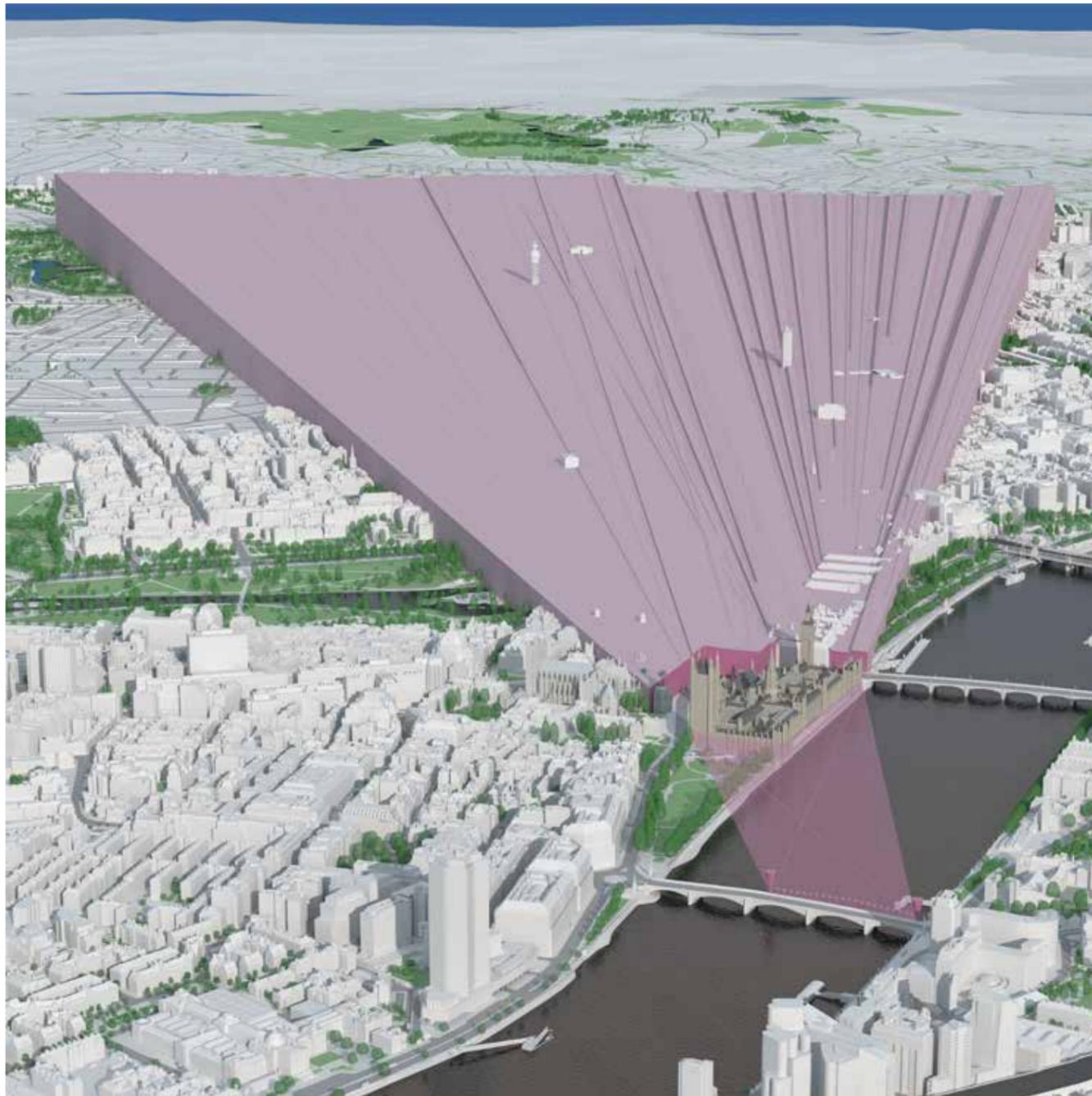
Taking account of existing obstructions

4.11 The LVMF Protected Silhouette policy precludes further changes to the existing skyline profile above a defined portion of the WHS. Where an existing view from an Assessment Point includes foreground obstructions occluding part of the WHS or where current development is visible behind the WHS, such changes to the overall skyline profile are taken into account in defining the models of each Protected Silhouette and raise the limit up to which development will be considered acceptable.



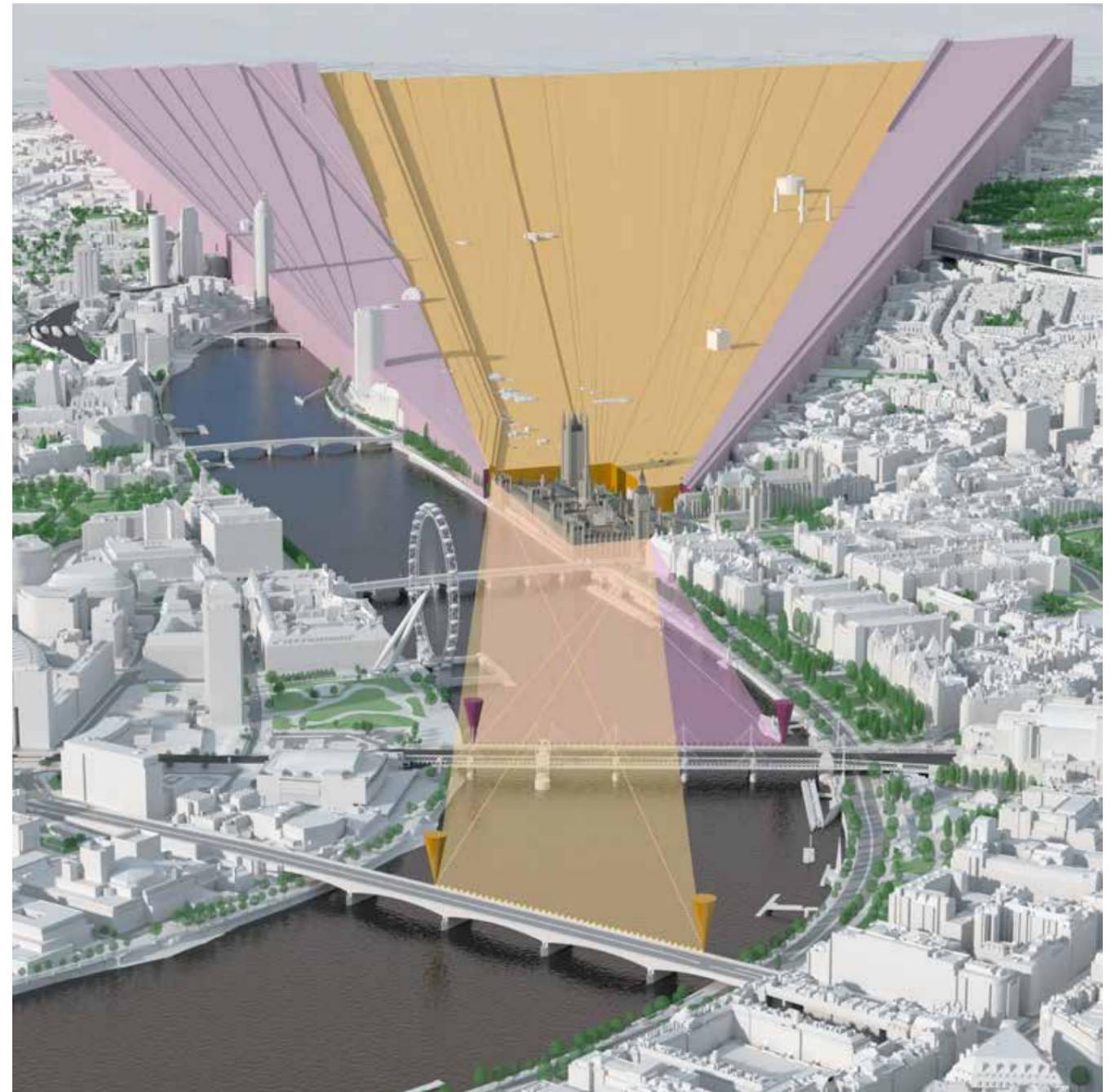
Modelling kinetic effects for a complete Protected Silhouette

4.12 For each Protected Silhouette, the modelling process defined above is repeated at regular intervals along the path between the defining Assessment Points. The resulting volumes are combined in such a way that the lowest condition along the path defines the limit of visibility in the resulting model. This ensures that development on any specific site would not be visible from any location along the defined path.



Combining Protected Silhouettes

4.13 To establish the overall effect of the interaction between all Protected Silhouettes, the individual models are combined in such a way that when more than one model overlap, the lower constraint is included in the resulting model.



5 Case 1: Analysing the combined effect of LVMF geometric protection

5.1 By combining the constraints that arise from all formally defined geometric protection in the LVMF, it is possible to map an area where strict building height limits have been defined around the WWHS. Within this area a series of progressively rising planes can be defined, below which development can take place without harming views of the WHS.

5.2 The most direct interpretation of the LVMF constraints takes into account the Protected Silhouettes defined from five River Prospects and one townscape view looking toward the Palace of Westminster, together with the foreground (Viewing Corridor) components of the 13 Protected Vistas.

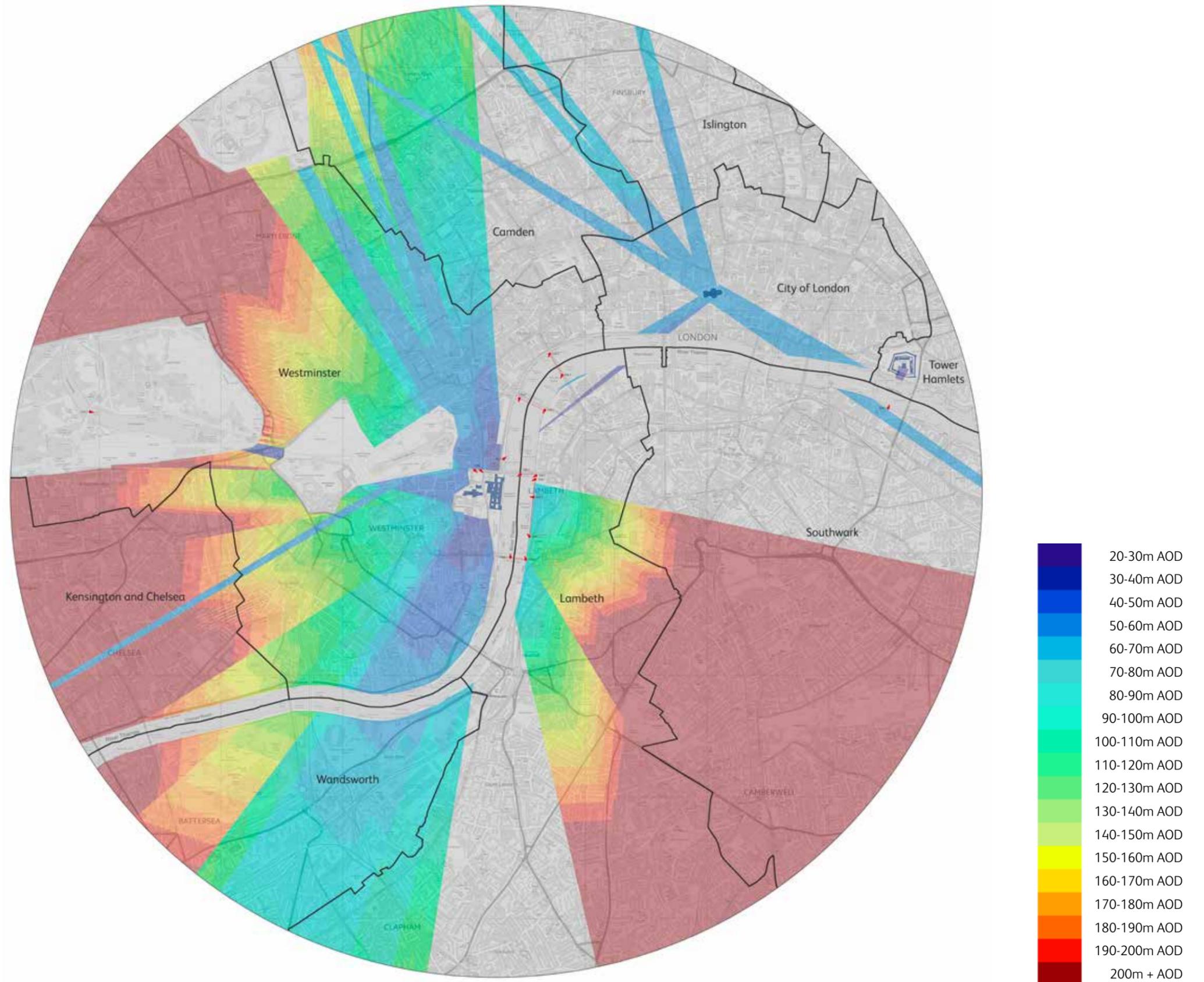
5.3 The Protected Silhouettes included in this analysis are:

- 15A | Waterloo Bridge: upstream
- 17A | Hungerford Bridge: upstream
- 18A | Westminster Bridge: upstream (between 18A.1 and 18A.2)
- 19A | Lambeth Bridge: downstream
- 22A | Albert Embankment: opposite the Palace of Westminster
- 27B | Parliament Square: north pavement

5.4 Taken in isolation, each Protected Silhouette generates a tightly defined form with sharp 'cliffs' at the edges of the defined outline of the Palace of Westminster. However, the overlapping definitions from adjacent Viewing Locations, ensure that these sharp edge conditions only occur when a Protected Silhouette has no immediate neighbour and hence could imply that no height limit might exist beyond the extent of the visible skyline features of the Palace of Westminster.

5.5 Were we to rely on this sole analysis there is an implication that unconstrained development might therefore occur

- in the area around Waterloo Station and the northern part of Southwark beyond the zone defined by the Protected Silhouette from the northern pavement of Parliament Square (27B)
- In the area around Vauxhall Station that falls outside the zone defined by the Protected Silhouettes from Hungerford Bridge (17A) and the Northern Pavement of Parliament Square (27B)
- areas in the Cities of Westminster and London beyond the zone defined by the Protected Silhouette from Lambeth Bridge (19A).



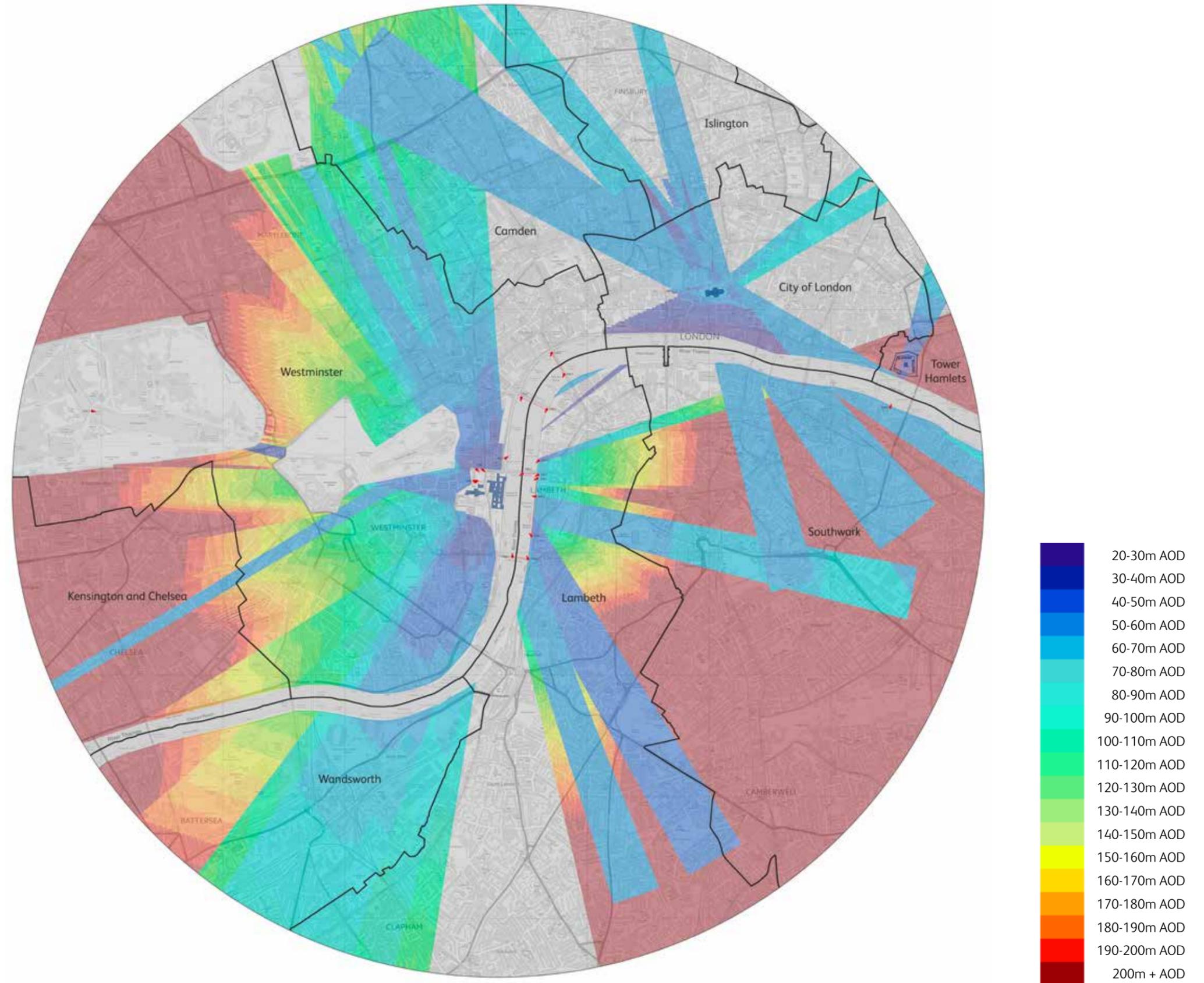
6 Case 2: Extending the analysis to reflect other LVMF development constraints

6.1 In addition to the formal geometric protection of its Protected Silhouette and Viewing Corridor definitions, the LVMF contains other guidance that can prevent, or strongly dissuade, development above specific thresholds. These include:

- Visual Management Guidance for specific views that effectively precludes development
- Wider Setting Consultation Areas defined for the 13 Protected Vistas
- In some views close to the WWHS, LVMF Visual Management Guidance includes wording that directs refusal for development that might impact on the setting of Palace or Westminster or Westminster Abbey, specifically:
- 21A.1 | Thameside in front of County Hall - precluding development above the WWHS
- 27A.1 | Parliament Square: South-west – precluding development above the WWHS and the parts the roof of County Hall closest to the Elizabeth Tower

6.2 In the Wider Setting Consultation Areas of each LVMF Protected Vista a consultation threshold is set as an extension to the development planes defined for each Viewing Corridor. Within these areas a test is applied that new development should 'preserve or enhance the ability to recognise and appreciate the Strategically Important Monument'. While this does not in all cases entirely prevent development above specific heights, it generally provides a strong deterrent to harmful development

6.3 The Background Wider Setting Consultation Area thresholds that form part of the Protected Vistas from Parliament Hill (2A.1 and 2B.1), Primrose Hill (4A.1) and Serpentine Bridge (23A.1) and the guidance relating to LVMF 27A generate additional height constraints within Lambeth. However, the opportunity areas surrounding Waterloo and Vauxhall are in no sense fully constrained by the LVMF.

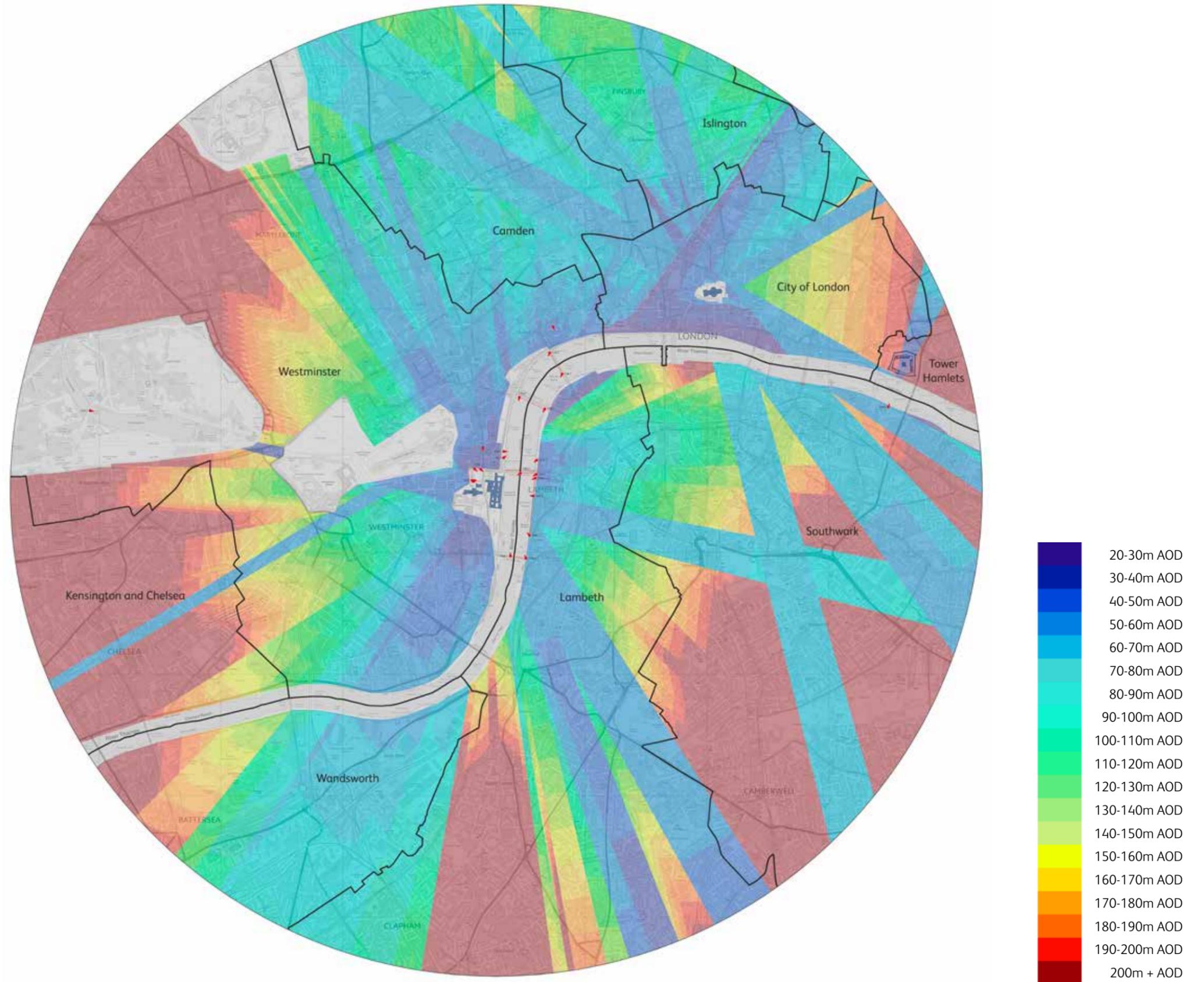


7 Case 3: Modelling additional planning policies to complete the protection of the WWHS “in the round”

7.1 Beyond the areas that have some form of formally defined height control there many other constraints that limit development that might impact on views out from the WWHS and views that create a setting for the World Heritage Site. These include:

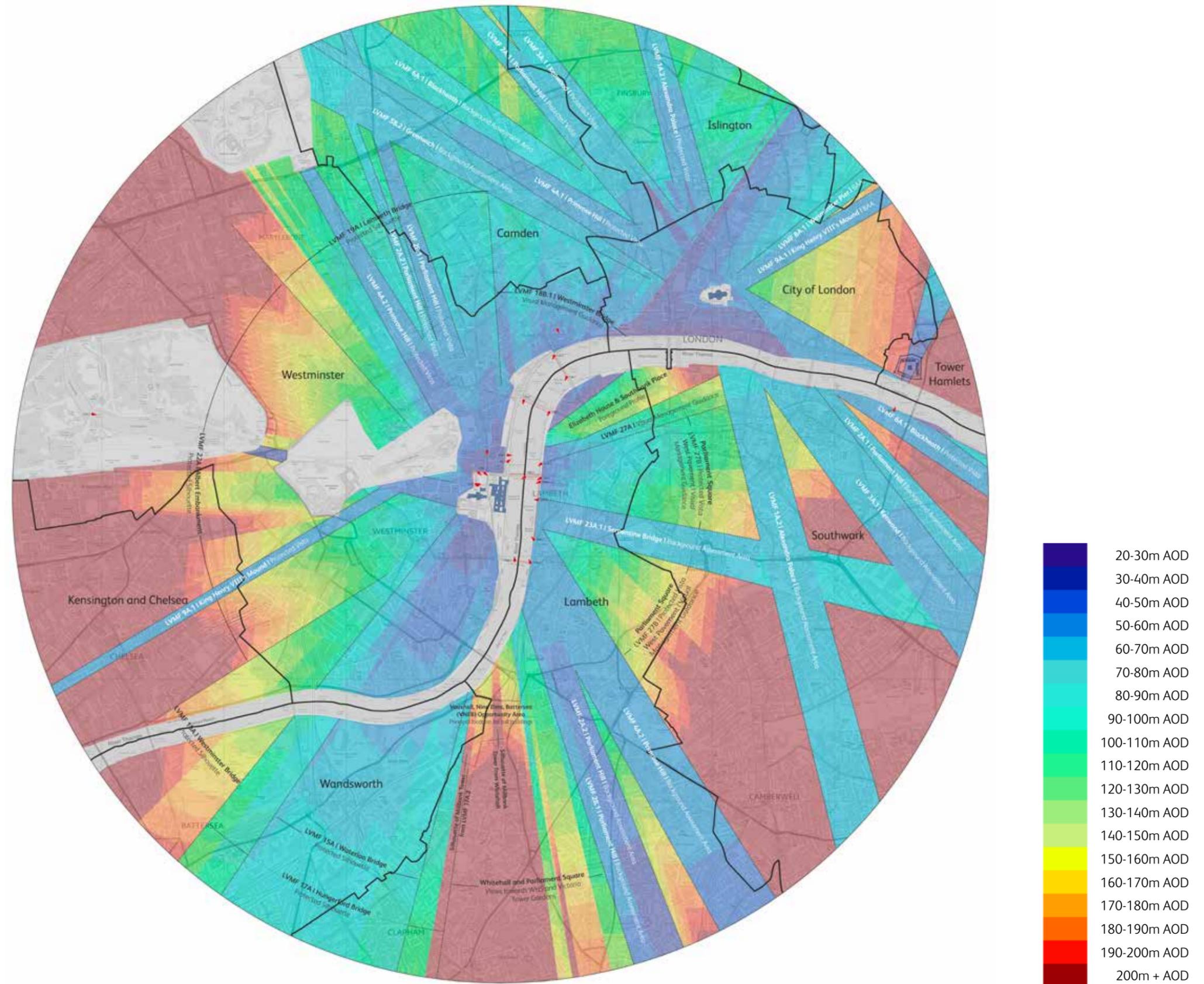
- LVMF guidance limiting development in views other than those toward the WWHS
- Geometric constraints applied by other London Boroughs e.g. St Paul’s Heights
- Planning guidance on the setting of Listed Buildings and Conservation Areas

7.2 To take these into account, similar modelling techniques have been applied to those used in the remainder of the study. For each modelled area, either a single assessment point has been identified or a series of two or more assessment points between which kinetic analysis can be generated. For each of area, an existing series of skyline elements have been identified above which new development is likely to be strongly opposed.



7.3 Additional constraints affecting the setting of the WWHS include:

- LVMF Visual Management Guidance from the Victoria Embankment (LVMF 20A) which seeks to protect the setting of County Hall by discouraging development eastwards which might appear above the ridgeline of this Grade II* building.
- Guidance for views downstream from Westminster Bridge (18B) which seeks to protect the skyline profile of the listed buildings within the Southbank Conservation Area, including the Royal Festival Hall (Grade I) and the Royal National Theatre (Grade II*).
- Guidance for views upstream from Westminster Bridge (18A) and for the development of the Vauxhall, Nine Elms and Battersea Opportunity Area. The Opportunity Area Framework suggested development might occur to a common height limit of 150m for buildings in the northern part of the Opportunity Area around Vauxhall Station. In the event a series of individual developments have been approved based on site specific townscape appraisals that have avoided a uniform height. The effects of the Protected Silhouette from Hungerford Bridge ensures that this new cluster is seen at a distance from the Central London bridges and does not encroach on the immediate setting of the WWHS.
- Guidance for views from the Southwest corner of Parliament Square (LVMF 27A) which ensure the prominence of the vertical silhouette of the Elizabeth Tower by precluding development above the southern part of the ridgeline of County Hall as it abuts the Palace of Westminster
- Guidance for views from the Northern Pavement of Parliament Square (LVMF 27B) toward Victoria Memorial Gardens. This again seeks to control development on the Albert Embankment that might impact on the iconic profile of the Victoria Tower and on development in VNEB Opportunity Area that might appear about King Henry VII's Chapel.
- Guidance from Historic England that seeks to ensure that rooflines of the courtyard of Somerset House (Grade I) are not impacted by development in Lambeth, in particular in views from the upper terrace close to the principal entrance from The Strand



Principal policies generating height constraints in Cases 1, 2 and 3

8 Conclusion

- 7.4 This report seeks to show that the wider setting of the Westminster World heritage Site is managed by a series of overlapping planning policies. By creating three-dimensional models to illustrate the constraints imposed or encouraged by these policies it has been possible to map the areas around the WWHS indicating height thresholds that result from one or more of these policies. Any proposals for future development that exceeds these thresholds needs to be carefully scrutinised, since it may damage the setting of the World Heritage Site.
- 7.5 The maps in the study are contoured to show height increments of 10m (measured above Ordnance Datum) and therefore provide only general guidance on thresholds of visibility. In all cases more accurate studies will be required, on a site-specific basis, to test visual impact on views from within and toward the World Heritage Site. Equally importantly, tests will be required to understand impact on local townscape and other historical assets. In many cases these localised tests will determine that development should be constrained to heights significantly below those indicated by the maps in this study. In other cases, visual analysis may show that well designed new development can enhance views even while exceeding the thresholds proposed in this study.
- 7.6 Finally, while the mapping process used in this study has necessitated looking at the wider setting of the WWHS 'in the round', its purpose was to provide a better understanding of the constraints that the successful management of the setting of the WWHS imposes on the London Borough of Lambeth. The information relating to other boroughs is therefore provided for information only.

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