

Appendix: Wind Microclimate

Annex 1: Legislative Planning Policy Context

Annex 2: Wind Tunnel Photos

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Annex 1: Legislative and Planning Policy Context

Annex 2: Wind Tunnel Photos

KEY LEGISLATION, POLICY AND GUIDANCE CONSIDERATIONS

1.1 The wind microclimate assessment has been undertaken within the context of relevant planning policies, guidance documents and legislative instruments. These are summarised below.

Legislation, Regulation and Planning Policy

National Legislation and Policy

National Planning Policy Framework, 2019

1.2 In February 2019, the Government published a revised version of the NPPF. There are no policies pertaining to wind microclimate in the NPPF.

National Planning Practice Guidance (2015)

1.3 The National Planning Practice Guidance (NPPG) was launched in March 2014 and provides a web-based resource in support of the NPPF. Following public consultation on a 'beta' version ending on 9 October 2013, the NPPG has been amended to include greater emphasis on the importance of bringing brownfield land into use and issuing more robust guidance with regards to flood risk.

1.4 Following its launch, a number of previously published planning guidance documents have been cancelled and are detailed within the Written Ministerial Statement titled 'Making the planning system work more efficiently and effectively', also dated 6th March 2014.

1.5 The NPPG identifies the potential for a building's size and shape (particularly in the case of tall and large buildings) to affect the wind microclimate. Under the section addressing 'Design: How should buildings and the spaces between them be considered?', the NPPG states in Paragraph 025 ('Consider form') that:

1.6 'Some forms pose specific design challenges, for example how taller buildings meet the ground and how they affect local wind [...] patterns should be carefully considered.' The NPPG goes on to state in Paragraph 026 ('Consider scale') that: 'Account should be taken of local climatic condition, including [...] wind'.

Local Planning Policy

Reading Borough Local Plan

1.7 The *Reading Borough Local Plan* (adopted November 2019) mentions wind microclimate as follows:

- *Paragraph 5.3.45: Street Environment*

"Tall buildings need not prejudice the creation or retention of a human scale street environment, provided that they are carefully located, designed with a distinct top and bottom, and have regard to the effects on the microclimate. There are a number of design solutions that can be used to assist in creating a human scale street environment:

- *Mitigating against the adverse impacts a tall building can often make on the microclimate;"*

- *Policy CR10: Tall Buildings*

"v) In addition to the area-specific requirements, all tall building proposals should be of excellent design and architectural quality, and should:

- *Mitigate any wind speed or turbulence...effects through design and siting;"*

Guidance

English Heritage and the Commission for Architecture and the Built Environment (2007)

1.8 English Heritage and the Commission for Architecture and the Built Environment (CABE) produced a revised and updated version of their joint guidance on tall buildings. The final version was released in July 2007; however, wind is not specifically covered in the guidance. Instead guidance on the quality of the buildings comprises a list of criteria; one aspect being Policy 4.1.9 which relates to the effect on the local environment.

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APPENDIX A: WIND TUNNEL PHOTOS

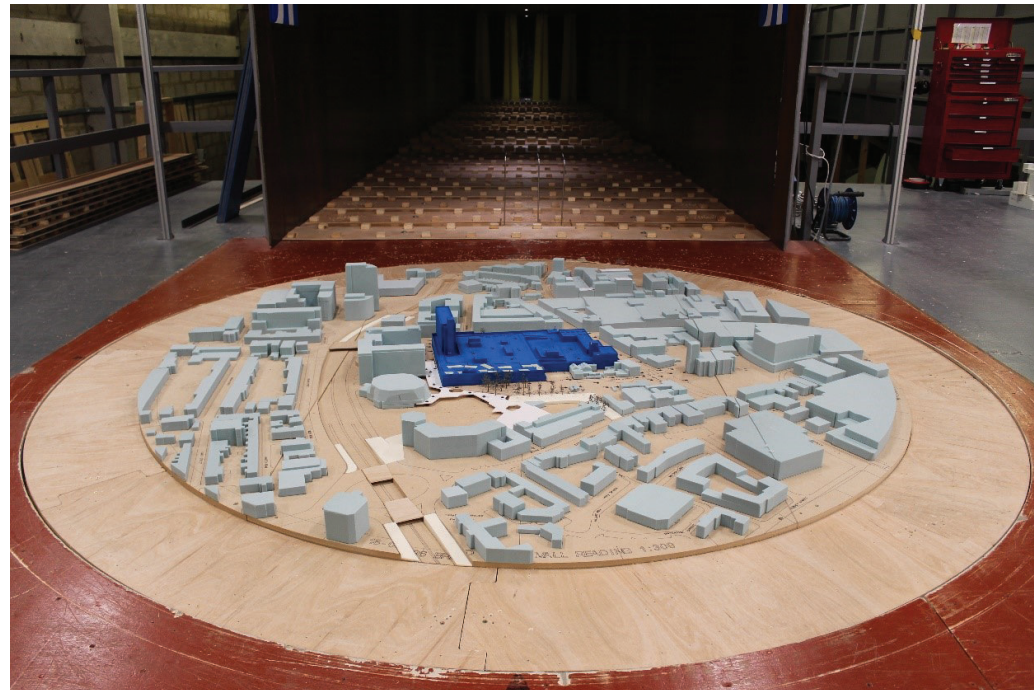


Figure 10.26 Existing Site with Existing Surrounding Buildings (Configuration 1) – View in the Wind Tunnel (from the south)

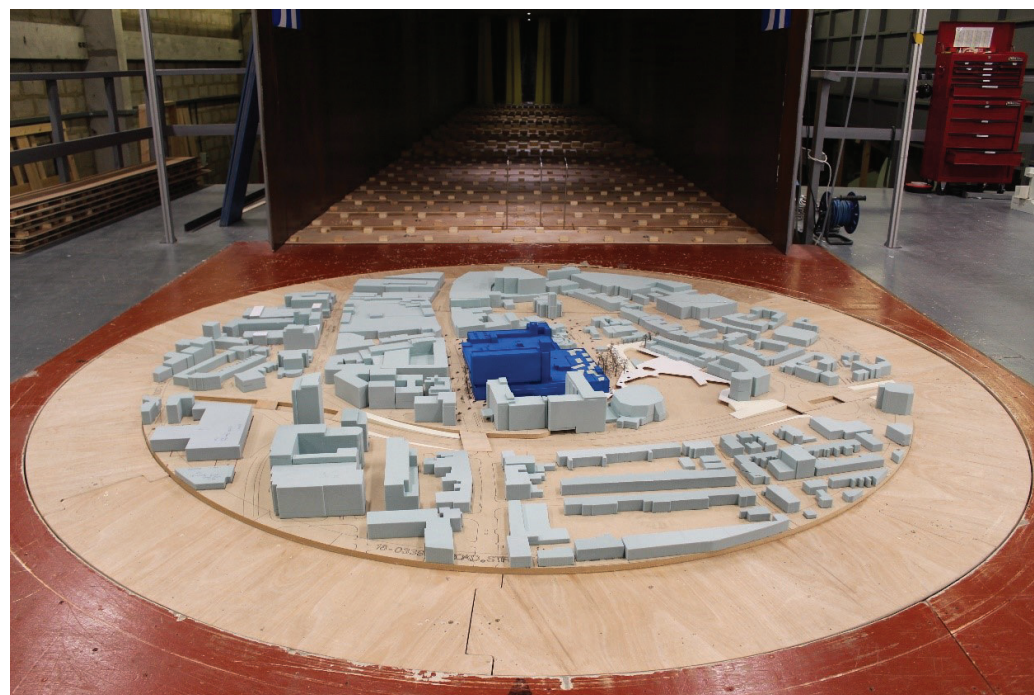


Figure 10.27 Existing Site with Existing Surrounding Buildings (Configuration 1) – View in the Wind Tunnel (from the west)



Figure 10.28 Proposed Development with Existing Surrounding Buildings (Configuration 2) – View in the Wind Tunnel (from the south)



Figure 10.29 Proposed Development with Existing Surrounding Buildings (Configuration 2) – View in the Wind Tunnel (from the west)



Figure 10.30 Proposed Development with Existing Surrounding Buildings and Landscaping Scheme (Configuration 3) – View in the Wind Tunnel (from the south)

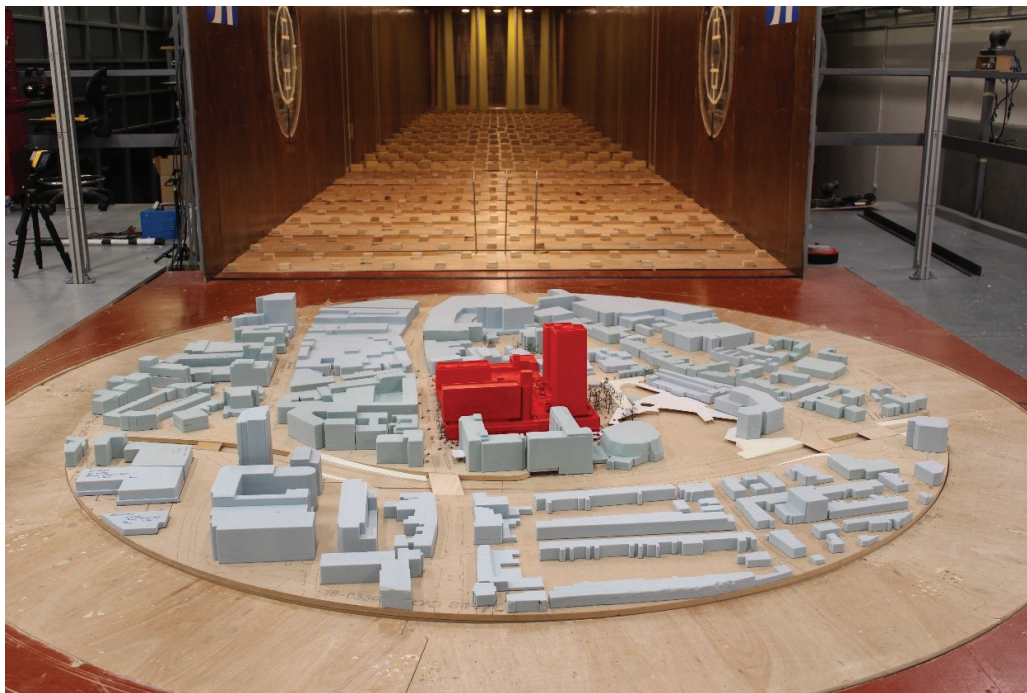


Figure 10.31 Proposed Development with Existing Surrounding Buildings and Landscaping Scheme (Configuration 3) – View in the Wind Tunnel (from the west)



Figure 10.32 Proposed Development with Existing Surrounding Buildings and Landscaping Scheme (Configuration 3) – (Wind Tunnel model photo)

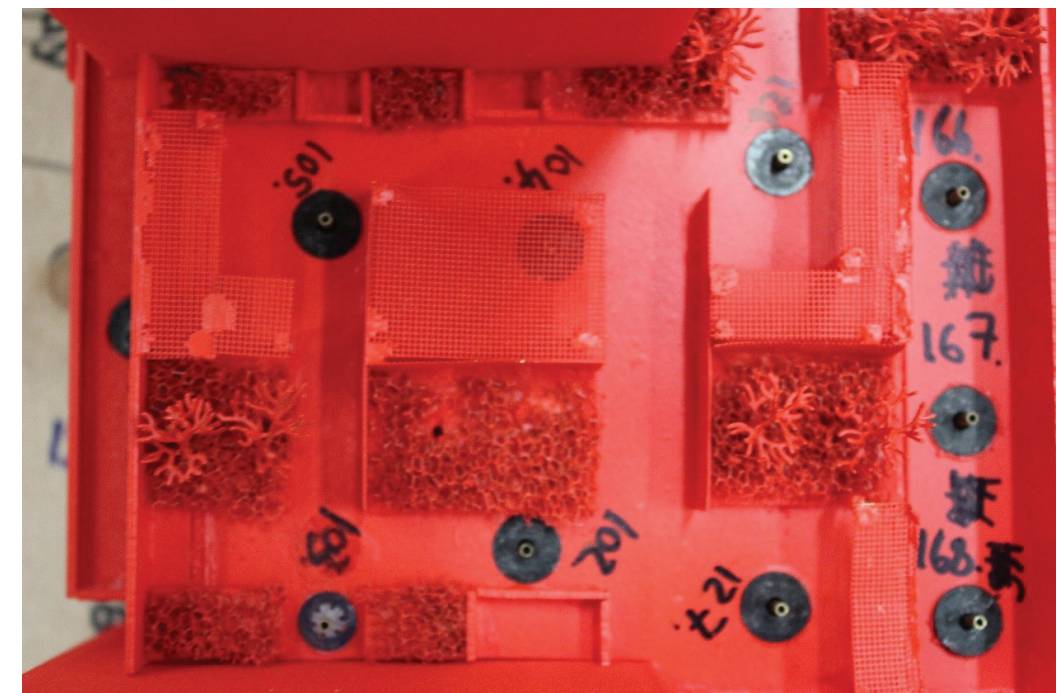


Figure 10.33 Proposed Development with Existing Surrounding Buildings and Landscaping Scheme (Configuration 3) – (Wind Tunnel model photo)



APPENDIX B: METEOROLOGICAL DATA

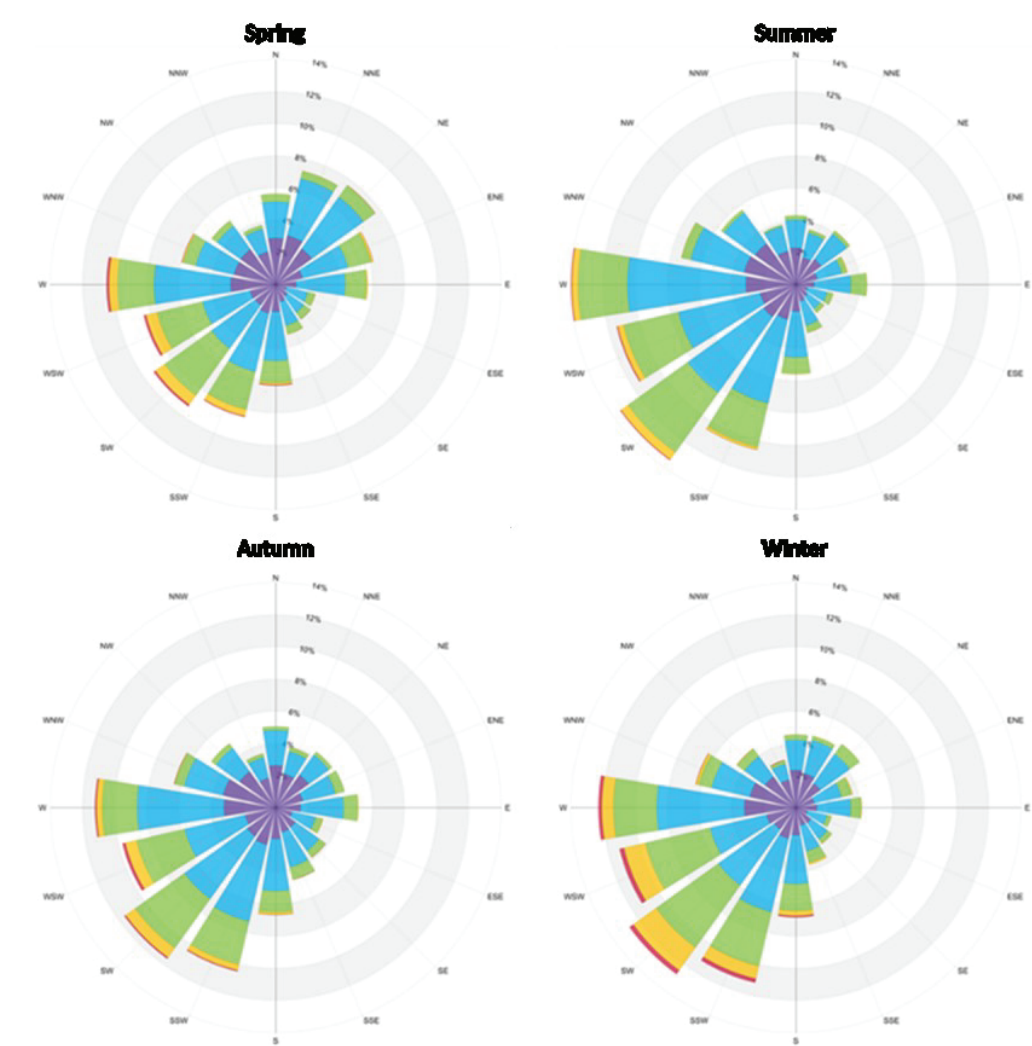


Figure 10.34 Seasonal wind roses for London Heathrow Airport

APPENDIX C: PROPOSED LANDSCAPING SCHEME

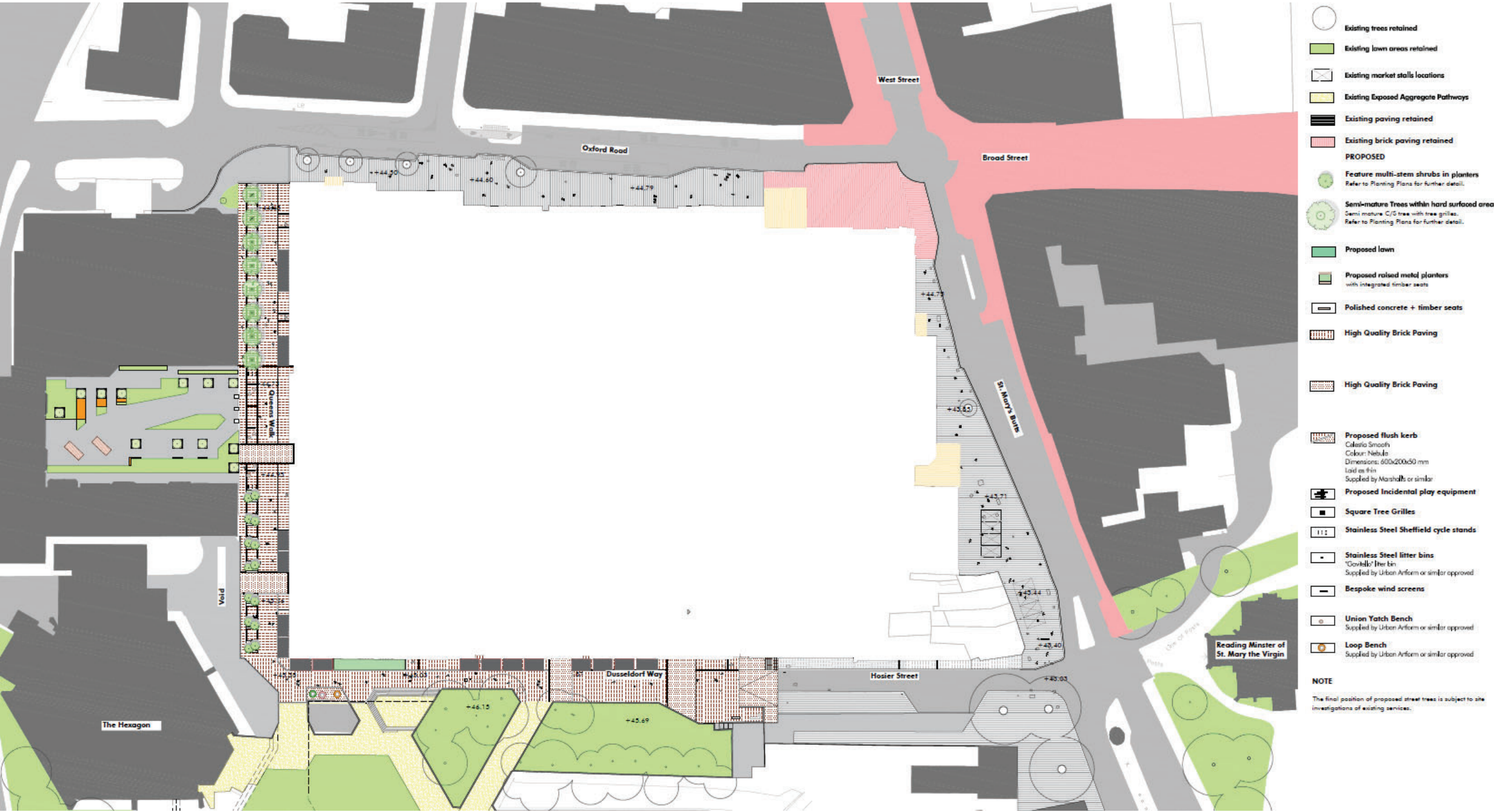


Figure 10.35 Proposed Landscaping Scheme – Ground Level

PEDESTRIAN LEVEL WIND MICROCLIMATE ASSESSMENT
BROAD STREET MALL

RWDI #1803396 Rev A
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Figure 10.36 Proposed Landscaping Scheme – Podium and Roof Levels