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## MEMORANDUM

<b>DATE:</b>	2019-10-20	<b>RWDI REFERENCE #:</b> 1803827
<b>TO:</b>	Neal Hunter	<b>EMAIL:</b> <a href="mailto:neal@greatgeorgestreet.co.uk">neal@greatgeorgestreet.co.uk</a>
<b>FROM:</b>	Krishan Jayyaratnam David Hamlyn	<b>Email:</b> <a href="mailto:krishan.jayyaratnam@rwdi.com">krishan.jayyaratnam@rwdi.com</a> <a href="mailto:David.hamlyn@rwdi.com">David.hamlyn@rwdi.com</a>
<b>RE:</b>	<b>Wind Microclimate Statement of Conformity – Landscaping Review</b>	

Dear Neal,

### **Introduction**

RWDI was retained to carry out a Pedestrian Level Desk Based Wind Microclimate Study on the proposed Great George Street development (hereafter referred to as the “Proposed Development”) in Liverpool in September 2018. That assessment found that in some areas around the proposed development, the local wind environment would be too windy for comfortable pedestrian use and would exceed the threshold for pedestrian safety.

In the time since that assessment was conducted, a landscaping strategy (See landscape plan PL-1822-VW-002) has been developed to address these safety concerns. This document will review these amendments with regard to highlighted safety exceedances and any benefit to predicted comfort issues. All other areas which would require mitigation in regard to pedestrian comfort as stated in the 2018 wind assessment would remain unchanged and all safety concerns have been addressed with the proposed landscaping set within plan PL-1822-VW-002.

### **Expected Wind Microclimate – 2018**

The main areas which were expected to exceed the threshold for pedestrian safety were in the thoroughfare spaces between Phase 1 and Block 2A and between Block 2B and 3A.

### **Proposed Landscaping Scheme**

The proposed landscaping scheme is attached in Figure 1. This landscaping scheme incorporated varied height trees/shrubs and porous screening throughout the Site, with focus on the thoroughfare spaces between Phase 1 and Block 2A and between Block 2B and 3A. Key features in these areas consist of:



- Pine trees – 6m high; and
- Wind baffles (porous 50% screens) – 1.5m high and 2-3m long.

These features are expected to eliminate strong wind exceedances in these areas and reduce wind speeds in general, resulting in a mix of strolling and walking wind conditions which would be suitable for the intended use of these areas.

With the proposed landscaping in place, all entrances to the Proposed Development would be expected to be suitable for the intended use.

Amenity spaces located in the Commercial Event Space, Commercial Podium Garden, Podium Garden and Residential Podium would be suitable for the intended use with the proposed landscaping in place.

#### **Additional External Terrace Space**

There is an additional terrace space located on Block 2B at level 02. Although this terrace is located in an area which was expected to have strong wind exceedances, the design of this terrace will include a 1.5m high solid balustrade with localised features around seating areas. These features are expected to eliminate any strong winds in this terrace.

#### **Conclusion**

The 2018 wind assessment highlighted areas where wind speeds would be expected to exceed the safety threshold. Subsequently, the proposed landscaping scheme has been reviewed and is expected to eliminate strong winds in these areas. Furthermore, the landscaping scheme is expected to provide some shelter to nearby entrances and amenity spaces which were highlighted as having comfort issues in the original 2018 wind assessment.

Yours truly,

A blue ink signature of Krishan Jayyaratnam, featuring a stylized 'K' and 'J' followed by a horizontal line.

Krishan Jayyaratnam, C.Eng  
Project Engineer

A black ink signature of David Hamlyn, written in a cursive style.

David Hamlyn, C.Eng  
Senior Engineer / Project Manager





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7. Order of construction and setting out to be agreed on site.

Site Boundary (indicated in red outline)

Notes:

Refer to detail plans 100 series for detailed information.  
Refer to PL1822.VW.101- Phase 2 - Detail General Arrangement Plan and PL1822.VW.106 - Phase 3 Detail General Arrangement Plan

0319.11.19PlanningETGB

0206.02.19Amend to include turning headMIGB

0105.10.18PLANNINGKWGB

0025.09.18PLANNINGKWGB

Issue	Date	Status	Drawn	Apprvd.
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Client

Great George Street Developments

Project

Great George Street

Drg Title

Overall General Arrangement Plan

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1:750

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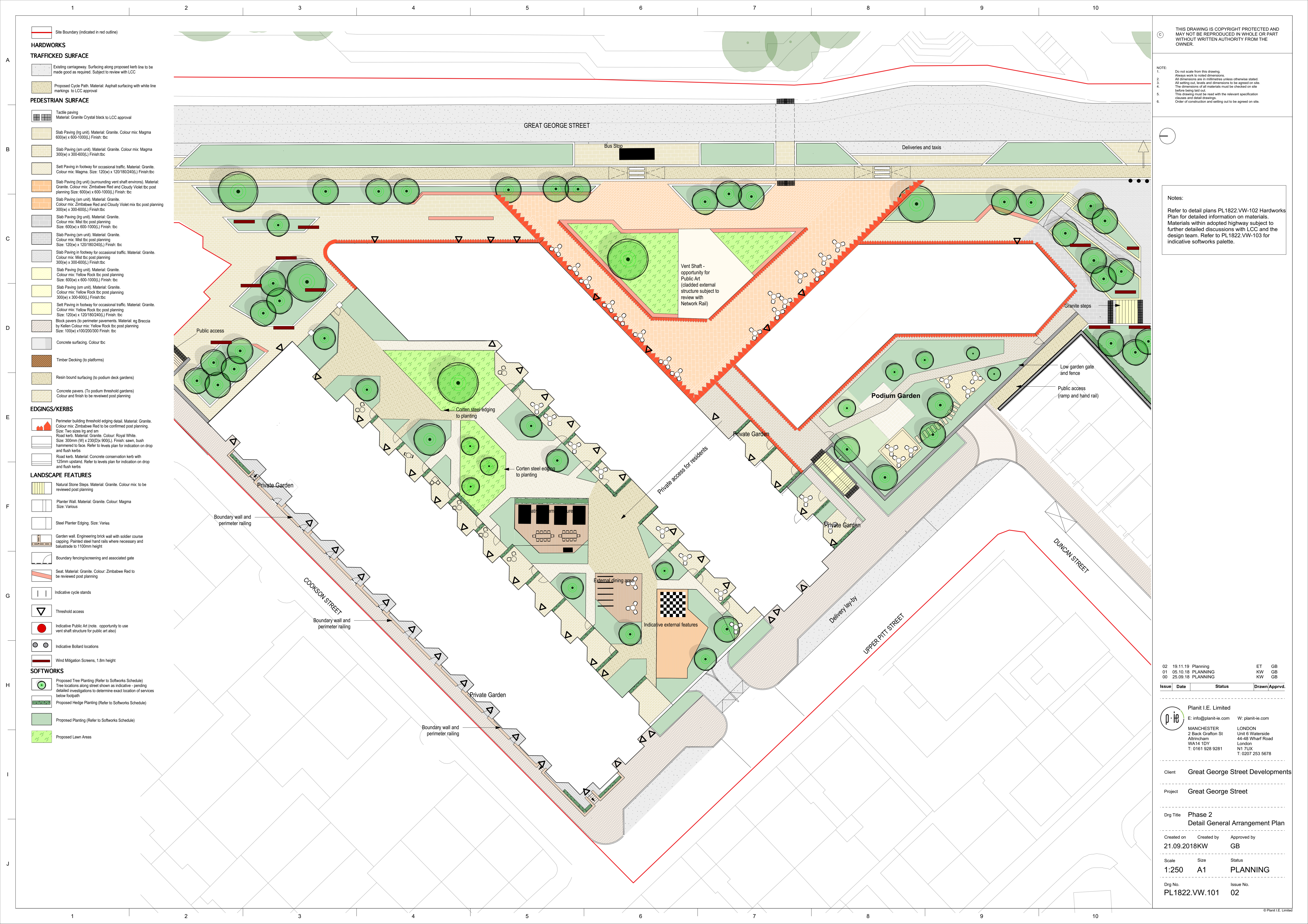
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PL1822.VW.002

03

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Notes:

Refer to detail plans PL1822.VW-102 Hardworks Plan for detailed information on materials. Materials within adopted highway subject to further detailed discussions with LCC and the design team. Refer to PL1822.VW-103 for indicative softworks palette.

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Client **Great George Street Developments**

Project **Great George Street**

Drg Title **Phase 2  
Detail General Arrangement Plan**

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21.09.2018KW		GB

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1:250	A1	PLANNING

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PL1822.VW.101	02





- Site Boundary (indicated in red outline)

**HARDWORKS**

**TRAFFICKED SURFACE**

Existing carriageway. Surfacing along proposed kerb line to be made good as required. Subject to review with LCC

Proposed Cycle Path. Material: Asphalt surfacing with white line markings to LCC approval

**PEDESTRIAN SURFACE**

Tactile paving  
Material: Granite Crystal black to LCC approval

Slab Paving (lg unit). Material: Granite. Colour mix: Magma 600(w) x 600-1000(L) Finish: tbc

Slab Paving (sm unit). Material: Granite. Colour mix: Magma 300(w) x 300-600(L) Finish: tbc

Sett Paving in footway for occasional traffic. Material: Granite. Colour mix: Magma. Size: 120(w) x 120/180/240(L) Finish: tbc

Slab Paving (lg unit) (surrounding vent shaft environs). Material: Granite. Colour mix: Zimbabwe Red and Cloudy Violet tbc post planning Size: 600(w) x 600-1000(L) Finish: tbc

Slab Paving (sm unit). Material: Granite. Colour mix: Zimbabwe Red and Cloudy Violet mix tbc post planning 300(w) x 300-600(L) Finish: tbc

Slab Paving (lg unit). Material: Granite. Colour mix: Mist tbc post planning Size: 600(w) x 600-1000(L) Finish: tbc

Slab Paving (sm unit). Material: Granite. Colour mix: Mist tbc post planning Size: 120(w) x 120/180/240(L) Finish: tbc

Slab Paving in footway for occasional traffic. Material: Granite. Colour mix: Mist tbc post planning 300(w) x 300-600(L) Finish: tbc

Slab Paving (lg unit). Material: Granite. Colour mix: Yellow Rock tbc post planning Size: 600(w) x 600-1000(L) Finish: tbc

Slab Paving (sm unit). Material: Granite. Colour mix: Yellow Rock tbc post planning 300(w) x 300-600(L) Finish: tbc

Sett Paving in footway for occasional traffic. Material: Granite. Colour mix: Yellow Rock tbc post planning Size: 120(w) x 120/180/240(L) Finish: tbc

Black pavers (to perimeter pavements). Material: eg Breccia by Kellen Colour mix: Yellow Rock tbc post planning Size: 100(w) x 100/200/300 Finish: tbc

Concrete surfacing. Colour tbc

Timber Decking (to platforms)

Resin bound surfacing (to podium deck gardens)

Concrete pavers (To podium threshold gardens) Colour and finish to be reviewed post planning

**EDGINGS/KERBS**

Perimeter building threshold edging detail. Material: Granite. Colour mix: Zimbabwe Red to be confirmed post planning. Size: Two sizes lrg and sm

Road kerb. Material: Granite. Colour: Royal White. Size: 300mm (W) x 230(D) x 900(L). Finish: sawn, bush hammered to face. Refer to levels plan for indication on drop and flush kerbs

Road kerb. Material: Concrete conservation kerb with 125mm upstand. Refer to levels plan for indication on drop and flush kerbs

**LANDSCAPE FEATURES**

Natural Stone Steps. Material: Granite. Colour mix: to be reviewed post planning

Planter Wall. Material: Granite. Colour: Magma Size: Various

Steel Planter Edging. Size: Varies

Garden wall. Engineering brick wall with soldier course capping. Painted steel hand rails where necessary and balustrade to 1100mm height

Boundary fencing/screening and associated gate

Seat. Material: Granite. Colour: Zimbabwe Red to be reviewed post planning

Indicative cycle stands

Threshold access

Indicative Public Art (note. opportunity to use vent shaft structure for public art also)

Indicative Bollard locations

Wind Mitigation Screens, 1.8m height

**SOFTWORKS**

Proposed Tree Planting (Refer to Softworks Schedule)  
Tree locations along street shown as indicative - pending detailed investigations to determine exact location of services below footpath

Proposed Hedge Planting (Refer to Softworks Schedule)

Proposed Planting (Refer to Softworks Schedule)

Proposed Lawn Areas
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Notes:  
Refer to detail plans PL1822.VW-107 Hardworks Plan for detailed information on materials.  
Materials within adopted highway subject to further detailed discussions with LCC and the design team. Refer to PL1822.VW-108 for indicative softworks palette.

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Client

Great George Street Developments

Project

Great George Street

Drg Title

Phase 3  
Detail General Arrangement Plan

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