



Consultant Advice

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Project: St. Pancras Campus, Camden **No:** G-006[2.0]

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General - Response to Greater London Authority Water & Green Infrastructure Memo Stage 1 - Final

This consultant advice addresses comments received from the Greater London Authority on the Water & Green Infrastructure from St Pancras Commercial Centre (SPCC).

Comments / Issues	Response
1. The approach to flood risk management for the proposed development complies with London Plan policy 5.12 (and draft New London Plan policy SI.12).	No response required.
2. The surface water drainage strategy for the proposed development does not comply with London Plan policy 5.13 (and draft policy SI.13), as it does not give appropriate regard to the drainage hierarchy. Further details on how SuDS measures at the top of the drainage hierarchy will be included in the development should be provided.	Refer AKT II response.



Comments / Issues	Response
<p>3.</p> <p>The proposed development partially meets the requirements of London Plan policy 5.15 (and draft New London Plan policy SI.5). The Applicant should confirm compliance with the residential consumption target of London Plan policy 5.15 (and draft New London Plan policy SI.5). The Applicant should also revise the sustainability strategy to incorporate rainwater harvesting, consistent with the architectural plans and drainage strategy.</p>	<p>Policy 5.15 Water use and supplies of the London Plan requires the design of residential development so that mains water consumption would meet a target of 105 litres or less per day. This excludes an allowance of 5 litres or less per head per day for external water consumption.</p> <p>A fittings based approach has been taken to determine the expected water consumption of the residential development. Accordingly, fixtures and fittings within the residential development will comply the maximum consumptions listed within Table 2.2 of Approved Document G. If, during design development, the above consumptions are varied, then it will be demonstrated using the water efficiency calculator that the 105 L/person/day requirement is still met.</p> <p>The current drainage strategy incorporates rainwater attenuation but not harvesting. Rainwater harvesting is not feasible. There is also insufficient space.</p>
<p>4.</p> <p>The Applicant should embed urban greening as a fundamental element of site and building design, in line with London Plan policy 5.10 and draft New London Plan Policy G1 and G5. Features such as street trees, green roofs, green walls, rain gardens, wild flower meadows, woodland and hedgerows should all be considered for inclusion. The Applicant should calculate the proposed development's Urban Greening Factor, as set out in Policy G5 of the draft New London Plan, and aim to achieve the specified target.</p>	<p>JCLA have responded as follows on 10/10/2019:</p> <p>We have worked out the 'Urban Greening Factor' of the landscape proposals within the site ownership boundary, which we calculate to be between the figures of 0.27 - 0.29. The difference is dependent on how proposed trees are factored into the calculations, as we consider the guidance is not 100% clear on how the provision of these valuable ecological/amenity elements should be accounted for. This is despite carefully reading the current Policy set out in the draft London Plan (2018) and its supporting information and supplementary guidance.</p> <p>Although this figure is lower than the 0.3 target suggested for 'predominantly commercial' developments, the landscape design incorporates a number of ecologically valuable elements, which contribute towards urban greening, including:</p> <ul style="list-style-type: none">- generous planting areas at ground level, upper terrace level and roof level, which include a diverse range of planting including native species, useful pollinator plants, food/nectar sources and varied seasonal interest- substantial new trees at a range of sizes providing valuable canopy cover and ecological benefits- areas of permeable surface at ground level- extensive and intensive planting areas on levels



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	<p>4,5 & 6 of the office block</p> <ul style="list-style-type: none">- designated habitat areas within the biodiverse roofscape- new street trees and rain gardens proposed for the surrounding public realm outside of the site ownership boundary <p>These soft landscape features and valuable ecological elements are balanced against the urban Central London location of the site and the need for a robust facade maintenance access strategy, whilst accommodating a mix of uses including a higher quantum of light industrial (Class B1c and B8) floorspace which requires ground floor level vehicular service and delivery access, thereby restricting the provision for urban greening to a certain extent.</p>
<p>5.</p> <p>An FRA has been submitted, which considers the risk of flooding from a range of sources. When mitigation measures are considered, the residual flood risk to the site is low.</p>	<p>No response required.</p>
<p>6.</p> <p>The approach to flood risk management for the proposed development complies with London Plan policy 5.12 (and draft New London Plan policy SI.12).</p>	<p>No response required.</p>



Comments / Issues	Response
<p>7.</p> <p>The surface water drainage strategy provides an assessment of existing runoff rates, greenfield rate and attenuation storage required to restrict the 100 year (plus 40% climate change) post-development discharge rate to greenfield rate.</p>	<p>No response required.</p>
<p>8.</p> <p>The surface water drainage strategy addresses the London Plan drainage hierarchy. Rainwater reuse and blue roofs are possible options, and a large attenuation tank is proposed for the bulk of the attenuation requirement. The Design and Access Statement suggests that blue roofs are not proposed and this inconsistency should be rectified. This approach does not satisfy the requirements of London Plan policy 5.13 (and draft London Plan SI.13). The Applicant should provide a stronger commitment to implementing rainwater harvesting and blue roofs.</p>	<p>Refer AKT II response.</p>
<p>9.</p> <p>The estimated attenuation requirement is 320 m3.</p>	<p>Refer AKT II response.</p>
<p>10.</p> <p>As of April 2019, London's 33 Lead Local Flood Authorities (LLFAs) have introduced the London Sustainable Drainage Proforma. This proforma is required to accompany Sustainable Drainage strategies submitted with planning applications and forms part of planning application validation requirements. The proforma sets a clear standard for the information that should be provided in a Sustainable Drainage strategy for all development in London. The proforma is intended to ensure that key information is provided with the initial planning application, reducing the need to request additional information throughout the assessment process and preventing delays in approval. Applications should be</p>	<p>Refer AKT II response.</p>



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<p>accompanied by a completed proforma when submitted. The proformas for all Local Authorities can be found here. (https://www.london.gov.uk/what-we-do/environment/climate-change/surface-water/london-sustainable-drainage-proforma) and on the relevant borough's websites. This initiative is supported by the Greater London Authority (GLA) and the London Drainage Engineers' Group (LoDEG).</p>	
<p>11. The surface water drainage strategy for the proposed development does not comply with London Plan policy 5.13 (and draft policy SI.13), as it does not give appropriate regard to the drainage hierarchy. Further details on how SuDS measures at the top of the drainage hierarchy will be included in the development should be provided.</p>	<p>Refer AKT II response.</p>
<p>12. The sustainability statement does not clearly state the intended specification for residential water consumption. The Applicant should confirm compliance with London Plan policy 5.15 (and draft New London Plan policy SI.5).</p>	<p>As per the response to item 3, we confirm the residential water consumption target will comply with Policy 5.15.</p>
<p>13. The sustainability statement proposes that the non-residential components of the development will target a minimum BREEAM rating of 'Excellent'. The BREEAM pre-assessments for these components show a greater than 40% reduction in water consumption and scores of 3 on water measures. This is in accordance with policy SI.5 of the draft new London Plan.</p>	<p>No response required.</p>
<p>14. The sustainability statement states that rainwater reuse is not feasible due to a lack of available space. The architectural plan for the proposed basement shows two rooms for this purpose and the drainage strategy suggests that rainwater harvesting is feasible. The sustainability strategy should be revised to incorporate rainwater harvesting.</p>	<p>The basement architectural plans were not fully resolved at this time and this space is not fully available for rainwater harvesting.</p> <p>The roofs of the residential blocks and commercial building are blue roofs to provide attenuation for reducing run-off rates. These roofs will discharge to sewer.</p> <p>The remaining areas where capture for rainwater harvesting could occur include residential balconies</p>



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	<p>and terraces, commercial balconies and terraces, the internal roadways between the buildings. These areas are not ideal for the collection of rainwater due to the increased potential for contamination of water, such as from pets, litter or vehicles. This would require increased levels of treatment for health risks, particularly for use in toilet flushing or washing machine usage.</p> <p>It is proposed, therefore, that rainwater harvesting be incorporated for irrigation of ground level planting where treatment requirements and health implications are less critical.</p> <p>Rainwater would be collected from ground surface areas, approximately 850 m². With a yield factor and loss coefficient of 0.7 and average yearly rainfall of 621 mm, approximately 44 kL of rainwater could be collected per month. This would support planting irrigation requirements which are advised by JCLA on 24/10/2019 to be as follows:</p> <p><u>Establishment (0-3/5 years post completion)</u> Trees: 600l / month Planting areas: 34,000l / month Total: 34,600l / month</p> <p><u>Post-establishment</u> Planting areas: 17,000l / month* (if necessary though the summer months)</p> <p>The above is only a rough estimation based on our usual maintenance guidelines and is based on the following assumptions:</p> <ul style="list-style-type: none">- It is averaged out throughout the course of a year - watering will be required more often than once per month in the summer months, and less often than once per month in the winter months- The above volumes may seem quite large, but is probably necessary for a workable planting irrigation strategy due to the rate at which the tank will fill up according to the time of year (ie. more quickly in winter, less quickly in summer)- The planting at ground level has been designed to be drought tolerant in alignment with water efficiency BREEAM requirements. However, it is always a requirement for a successful soft landscape scheme that the planting be irrigated in times of unseasonal weather, even after it is fully established. <p>A volume of 12 kL is proposed and should be feasible to fit within the basement.</p>



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<p>15.</p> <p>The proposed development partially meets the requirements of London Plan policy 5.15 (and draft New London Plan policy SI.5). The Applicant should confirm compliance with the residential consumption target of London Plan policy 5.15 (and draft New London Plan policy SI.5). The Applicant should also revise the sustainability strategy to incorporate rainwater harvesting, consistent with the architectural plans and drainage strategy.</p>	<p>As per the response to item 3, we confirm the residential water consumption target will comply with Policy 5.15.</p> <p>Response for rainwater harvesting as per response to item 14.</p>
<p>16.</p> <p>The Applicant should embed urban greening as a fundamental element of site and building design, in line with London Plan policy 5.10 and draft New London Plan Policy G1 and G5. Features such as street trees, green roofs, green walls, rain gardens, wild flower meadows, woodland and hedgerows should all be considered for inclusion. The Applicant should calculate the proposed development's Urban Greening Factor, as set out in Policy G5 of the draft New London Plan, and aim to achieve the specified target.</p>	<p>Please refer to the response from JCLA (10/10/2019) in item 4.</p>

Should you require further information, please contact the undersigned.

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