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## **TBGE comments for Wandsworth Local Plan** **(pre-publication – version Nov 2020)**

### **Comments for:**

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2.40 Wandsworth Environment and Sustainability Strategy (WESS)  
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LP60 River Corridors  
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Note: Following incorporation of any of our suggested amendments to Sections 2 & 3 of the Local Plan, a review should be carried out for potential subsequent amendments to the Area Strategies. This also impacts the 'achieving design excellence' within Section 14 and associated LPs.

### **2.16 Climate change and sustainable development - Carbon**

'Council carbon neutral as an organisation by 2030 and carbon zero by 2050'

Carbon neutrality and carbon zero have a primary focus on climate change *mitigation* with indirect benefits gained many years in the future if *global* ambitions are met. The gains will primarily relate to a reduction in background air temperatures (separate from urban heat island effect which relate to local surfaces and geometric designs). The key climate change impacts for Wandsworth residents relate to overheating risk (background air temperatures plus urban heat island effect), drought / flood risk and, indirectly through increased air temperatures, poorer air quality (e.g. ozone levels <https://www.sciencedaily.com/releases/2019/07/190723121906.htm>).

The link between carbon / energy and the above climate change impacts needs careful consideration *holistically* as local solutions can provide multiple benefits / greater value if considered together (meeting Corporate Plan demonstrating 'value for money'). This includes tackling the link between increased Covid

deaths and air pollution as part of the wider air quality considerations (<https://airqualitynews.com/2020/10/27/15-of-global-covid-deaths-attributed-to-air-pollution/>).

A comprehensive climate change and sustainable development plan would clarify the difference between *mitigation* (Paris Agreement Article 2) and *adaptation* (Article 7). It is only the adaptation elements that *can* provide the climate change resilience felt by Wandsworth residents immediately and in the Local Plan period as part of any development plans. Integrated Water Resource Management (IWRM) with Blue Green Technologies (BGT) can provide a route to delivering these holistic, highly-gearred gains in many areas at risk of negative climate change impacts.

## **2.18 Climate change and sustainable development – Air quality**

‘the Council has produced an Air Quality Action Plan to achieve improvements by reducing polluting emissions through measures such as reducing the need to travel by car, setting out criteria for sustainable design, and promoting sustainable demolition and construction working practices on development sites’

The Local Plan does not provide a balanced approach to the management of local air quality beyond ‘transportation and construction activities’. This replicates a similar omission in the London Plan and does not relate a requirement to adopt Mayor of London best practice guidance on ‘Using Green Infrastructure to protect people from air pollution’.

([https://www.london.gov.uk/sites/default/files/green\\_infrastruture\\_air\\_pollution\\_may\\_19.pdf](https://www.london.gov.uk/sites/default/files/green_infrastruture_air_pollution_may_19.pdf)).

The Local Plan should recognise the likely change in legal status on local air quality following the Ella Adoo-Kissi-Debrah inquest and extend considerations beyond PM2.5 & PM10 (to be measured) to ultrafine particles with their associated health impacts (e.g. Kings College studies on child lung growth driving a school’s focus).

(<https://www.swlondoner.co.uk/news/18122020-99-of-londoners-breathe-air-that-breaks-world-health-organisation-rules/> , <https://www.airportwatch.org.uk/2020/01/new-kings-college-study-on-ultrafine-particle-air-pollution-shows-it-spreads-far-into-london/> )

## **2.19 Climate change and sustainable development - Buildings**

‘Most carbon emissions come from buildings of an inefficient design and with poor energy performance. To address this, improvements must be made to existing, as well as new buildings, to effectively reduce carbon emissions.’

This limited view relating climate change and sustainable development to carbon emissions, i.e. energy usage, does not address the post-pandemic recovery ambition to include health and wellbeing within sustainable development plans. One key element is for effective ventilation *in consideration of* energy requirements *and* reducing airborne infection risk, amongst other things such as improving indoor air quality. ‘Effective ventilation’ should include a much wider consideration of natural ventilation systems as part of the electric vehicle transition (reduced gaseous pollution levels) with added, wider benefits gained through ‘quality passive design’.

Moderation of the thermal and pollution elements of the local environment through blue green solutions can provide an effective way to moderate the energy requirements of buildings and impacts of local poor air quality on opportunities for delivering effective ventilation with reduced need for filtered, mechanical systems.

#### **2.40 Wandsworth Environment and Sustainability Strategy (WESS)**

In addition to the multi-benefits that Integrated Water Resource Management (IWRM) with blue green technologies (BGT) can generate supporting health and wellbeing, tree / vegetation planting should have a strategy developed which includes reduction of plastics pollution within our water courses. For example, a well-designed tree pit, e.g. supported by rainwater runoff from the streets, could lead to a microplastic removal rate of in excess of 95% protecting the Thames and, ultimately, our oceans.

<https://greenblue.com/gb/utilizing-suds-lid-tree-pits-for-micoplastic-filtration/>).

### **Spatial Vision and Strategic Objectives – Social objectives**

Addressing social inequality through reduction in local urban heat island effect and poor local outdoor air quality.

#### **2.72 Open space**

The Local Plan should recognise that, although there are many stated benefits of open space to health and wellbeing, these benefits diminish quickly with distance from the open space and therefore time spent in these environments as well. In order to gain these benefits for much greater amounts of time as we spend time in our homes and workplaces, it is necessary to moderate the local environment away from open spaces as well. Blue green technologies integrated into our urban fabric away from open spaces provide an approach that can generate these benefits.

#### **2.74 Design and built form**

'the Council will expect development proposals to demonstrate positive design outcomes that can bring benefits for health, wellbeing and quality of life'. Also see 'Placemaking' in Section 3 and LP4 Tall Buildings.

The Council should adopt an interdisciplinary planning framework to support Climate Responsive Urbanism. Built form is a key driver of urban climate. Beyond health and wellbeing / quality of life, built form also has a large impact on building energy management (e.g. reduced urban heat island effect) and air quality (e.g. via wind dispersion of pollution). In a high-density urban fabric the direct and indirect impacts of built form designs need to be better understood in order to incorporate better guidance via a planning framework.

### **3.14 Principles for Cohesive, Connected and Healthy Communities - Placemaking**

'A coherent blue/green infrastructure system helps improve air quality, contribute to biodiversity and support health and wellbeing. It needs to be effectively maintained and managed. Well-designed places have sustainable drainage systems to manage surface water, flood risk and significant changes in rainfall.

The urban environment makes use of sustainable drainage systems and natural flood resilience.'

The link between blue/green infrastructure and the economy should be made in order to better capture the true value of incorporating blue green (and integrated water resource management) into our designs. For example, there is a direct link to the generation of local low skilled jobs, e.g. generation and maintenance of the systems, and indirect link to savings that could be made elsewhere, e.g. reduced mental and physical healthcare costs.

There are many solutions available beyond incorporation of sustainable drainage systems that tends to dominate the design vocabulary and is therefore limiting in application. For example, options which extend to reducing urban heat island effect (generating urban cool islands) are also discussed in this Earthwatch Europe talk on outdoor thermal comfort [[link here](https://us02web.zoom.us/rec/share/Sy-lqOk_R4o6m9wt1AdzXn-GuFF9geNJ-AnlHMu8YVgcZrmePm_BmRVX791Duf0X.1t6Tlsm-gLnYABhz) - start @ 9min - copy / paste whole link - [https://us02web.zoom.us/rec/share/Sy-lqOk\\_R4o6m9wt1AdzXn-GuFF9geNJ-AnlHMu8YVgcZrmePm\\_BmRVX791Duf0X.1t6Tlsm-gLnYABhz](https://us02web.zoom.us/rec/share/Sy-lqOk_R4o6m9wt1AdzXn-GuFF9geNJ-AnlHMu8YVgcZrmePm_BmRVX791Duf0X.1t6Tlsm-gLnYABhz)].

#### **LP1 Urban design – Point 10**

Suggest include wording 'consider incorporation of Integrated Water Resource Management (IWRM) with Blue Green Technologies (BGT)'. As it is a 15-year plan include wording 'as evidence emerges about and details are generated in planning frameworks for 'Climate Responsive Urbanism', these should be considered in development plans (possibly Point 2).

#### **LP2 General development principles**

Suggested wording possibly within Point D 'Development must consider circular economy principles extending to local capture and reuse where appropriate (e.g. rainwater).'

#### **LP4 Tall Buildings - Microclimate**

Council should consider adoption of recent best practice City of London Corporation guidelines for thermal comfort and wind microclimate.  
<https://www.cityoflondon.gov.uk/services/planning/microclimate-guidelines>

#### **LP5 Residential extensions and alterations – Point 9**

Hardstandings would be constructed of porous and/or permeable materials...

Possible Point 10: There should be consideration of rainwater capture and reuse through water butts and possible disconnection of drainpipes through addition of planters and soakaways. Council should provide support including information on how to do this and financial benefits from doing this by reclaiming drainage costs from Thames Water. Also see 14.56.

#### **15 / LP10 Tackling climate change**

15.1 ..to mitigate *and adapt* to the effects of climate change... Note best practice for adaptation in UK Climate Change Committee reports. Currently mixed message with adaptation elements included within mitigation terminology (not clarified by expansion of Point H although 15.19 noted).  
<https://www.theccc.org.uk/publication/progress-in-preparing-for-climate-change-2019-progress-report-to-parliament/>

Note new guidance to be given by GLA on 'cool roofs'. This includes painting white and 'green planted surfaces' but should extend to energy savings (e.g. solar heat gains and heat losses through surfaces) as well as other blue green benefits.

Point C: 'Maximum feasible reductions in carbon emissions' should not be achieved to the detriment of health and wellbeing. This extends to better ventilation and reduced airborne infection risk.

Local capture and reuse of rainwater where applicable. Consideration should also be made to disconnect downpipes if possible. Note London drainage hierarchy should be adopted throughout the Local Plan. In particular apply within LP12. Noted in 15.41.

<https://www.london.gov.uk/what-we-do/planning/london-plan/current-london-plan/london-plan-chapter-five-londons-response/pol-12>

### **LP12 Water & Flooding Sustainable Drainage**

Point C. The Council will require the use of Integrated Water Resource Management (IWRM) with Blue Green Technologies (BGT) which includes but is not limited to the use of Sustainable Drainage Systems (SuDS) in all development proposals.

Greater clarification is needed on percentage attenuation definition with appropriate applications. As part of a wider assessment of flood risk, local planning decisions should consider use of upstream rewilding, reduction in canalisation and use of IWRM + BGT *in addition to* SuDS (one blue green solution of many). Following the rewilding approach of 'Making Space for Water', this thinking should be adopted for high-density urban fabric as well incorporating porous and/or permeable paving and roads as well. An added benefit from porous and/or permeable paving and roads includes reduced pollution from surface water run-off into the water courses, e.g. microplastics.

### **LP14 Air Quality, Pollution and Managing Impacts of Development**

Point D4. Detailed assessment for strict mitigation measures can require consideration of advanced computational techniques, such as computational fluid dynamics (CFD), where limitations in traditional (Gaussian) techniques render detailed design improvement assessments impossible.

## **21 Green & Blue Infrastructure & the Natural Environment Introduction**

The fully comprehensive approach to water and urban heat island management, maximising the benefit to green spaces and mitigating exposure to drought and surface water flooding in urban settings is Integrated Water Resource Management (IWRM) with blue green technologies (BGT).

It is recognised as global best practice with many applications. For example, rainwater harvesting (RWH) designs for either immediate reuse or storage for use at a later time. There's a wide range of applications including domestic gardens and water supply, or for civic use in large public green spaces, parks, roofs and gardens, but also in smaller street spaces. The 'blue' element of blue greening can include water storage / attenuation elements in support of 'green' natural planted infrastructure. Natural watercourses are part of the blue infrastructure complemented by the other applications.

In rural settings, blue-greening is the 'rewilding' of cultivated, controlled land and river systems back to their former, more attenuating natural states. This again protects and retains valuable water by mitigating flood and drought, as well as allowing native flora and fauna to flourish.

There are examples of best practice from around the world, with one of the most well-known the US city of Philadelphia which is half-way into an extensive 15-year program to become a Blue-Green city.

Currently no UK city or local authority is employing the full tool-kit of blue green technologies. SuDs (Sustainable Urban Drainage Systems), is an example of one blue green technique. However, in contrast, full blue-greening requires a total but gradual networked application across all civic and residential buildings, roads, pavements and green spaces. Although requiring a long-term vision and commitment to install the required blue-green infrastructure, environmental and financial benefits begin to accrue from the early stages, beginning with considerable job creation on all levels, revenue savings from reduced requirement for flood defences and emergency water supply in drought periods, reduced Urban Heat Island (UHI) effect in summer reducing overheating risks. This is an especially important consideration for vulnerable groups, such as the elderly and disabled, and other benefits include better mental health and reduced crime.

Council should consider greater clarification between wide benefits gained from blue green infrastructure in open spaces (infrequent usage by an individual) and those integrated into our living and working places (frequent usage).

#### **General Note**

All Policy references in Place Making sections should include IWRM with BGT in clauses referencing Blue and Green Infrastructure.

#### **LP55 Protection and Enhancement of Green and Blue Infrastructure**

Suggest addition of new item,

Point F. The council will embark on developing and implementing an Integrated Water Resource Management (IWRM) Plan encompassing Rainwater Harvesting (RWH) and all available blue green Technologies (BGT) to complement the natural rivers, streams, other watercourses and bodies of water in order to generate a scaled expansion of green spaces and a program of planting within and on the existing built (grey) infrastructure.

#### **LP58 Tree Management and Landscaping – Point 8**

There must be consideration of the tree pit design and potential water supply (e.g. direct drainage off street) to promote healthy trees. It should be noted that poor design leads to stunted trees that may require replacement should they fail and negative carbon impact as a result.

Another key consideration for developments is for the use of trees to shade and, as a result, reduce cooling / energy requirements. Consideration of the wind environment is also required, such as reducing windiness in the pedestrian zone for comfort and safety as well as increasing windiness for pollution dispersion purposes.

#### **LP59 Urban Greening Factor**

Point A. All development proposals should contribute to the greening of Wandsworth borough by including urban greening (*Integrated Water Resource Management with Blue Green Technologies*) as a fundamental element of site and building design, and by incorporating measures such as high quality landscaping (including trees), green roofs, green walls and nature-based sustainable drainage.

and

Point B2. incorporate as much soft landscaping and porous / permeable pavement and road surfaces as possible. In consideration of their wider benefits, these can be included at a reduced cost to traditional surfaces.

### **LP60 River Corridors**

A. The natural, historic and built environment of the River Thames corridor and watercourses within the borough will be protected and, where appropriate, enhanced *by rewilding* to ensure the achievement of a high quality and accessible environment including through the provision of connections to existing and new communities and to maximise biodiversity benefits.

### **[NB good to see Thames development being disallowed:**

E. Development which encroaches onto the river foreshore will not be supported. Opportunities will be taken, in consultation with partner agencies including Natural England, the Port of London Authority and the Environment Agency, to create new habitats and reduce flood risk in accordance with the requirements of the Thames Estuary 2100 Plan.]

### **LP62 Moorings and Floating Structures**

We very much support this clause especially naturalisation element

C. The culverting of river channels and watercourse will not be permitted and the naturalisation of river channels and watercourses will be sought as part of development proposals where appropriate and feasible

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