

## Former Stag Brewery. Sustainability response.

Application name	Former Stag Brewery
Application number	22/0902/FUL
Proposal description	Erection of a three-storey building to provide a new secondary school with sixth form; sports pitch with floodlighting, external MUGA and play space; and associated external works including landscaping, car and cycle parking, new access routes and other associated works
Planning application link	<a href="https://www2.richmond.gov.uk/lbrplanning/Planning_CASENO.aspx?strCASENO=22/0902/FUL&amp;DocTypeID=7#docs">https://www2.richmond.gov.uk/lbrplanning/Planning_CASENO.aspx?strCASENO=22/0902/FUL&amp;DocTypeID=7#docs</a>

The RAG rating applied in the Accelar comments and recommendations column represents the following:

Green	Meets the policy requirement
Amber	Partially meets the policy requirement or unclear whether policy compliance is achieved. Minor clarifications required.
Red	Does not meet policy requirement, further action needed

Policy	Extract from planning documentation	Reference	Accelar comments and recommendations	Applicant responses 15/03/23
<b>Sustainable design and construction</b>				
Developments will be required to achieve the highest standards of sustainable design and construction to mitigate the likely effects of climate change. Applicants will be required to complete the following: 1. Development of 1 dwelling unit or more, or 100sqm or more of non-residential floor space (including extensions) will be required to complete the Sustainable Construction Checklist SPD. A completed Checklist has to be submitted as part of the planning application. 2. New non-residential buildings over 100sqm will be required to meet BREEAM 'Excellent' standard.	See Appendix D of Sustainability Statement, LBRuT sustainability checklist.  The office, retail, leisure and school elements of the Proposed Development, will target a BREEAM 'Excellent' rating as a minimum under BREEAM New Construction.  At the pre-assessment stage the school has achieved a BREEAM rating of Excellent with a score of 72.3%.	Sustainability Statement, pages 4, 30, Appendix D, Hoare Lea, March 2022.	The applicant has submitted a Sustainable Construction Checklist as an appendix to the Sustainability Statement. This matches the version submitted with the outline application, 22/0900/OUT.  If the council would prefer a Checklist specific to the school, it should be requested from the applicant.  The BREEAM pre-assessment indicates that the school is on track to achieving a BREEAM score of Excellent, as required by policy. The applicant has agreed the following as a planning condition for the school, capturing:	Recommendation of condition welcomed, subject to wording (to be agreed).

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<p>3. Proposals for change of use to residential will be required to meet BREEAM Domestic Refurbishment 'Excellent' standard (where feasible).</p> <p><i>London Borough of Richmond LP 22 (part 2 of the original policy covers water efficiency, this is included in the row below).</i></p>			<p>At the design (e.g., prior to the commencement of above ground construction works) and as-built (e.g., within six months of works finishing) stages of the school, new construction BREEAM certificates are submitted to the council demonstrating that a score of Excellent has been achieved for the school.</p>	
<p>In order to minimise the use of mains water, water supplies and resources should be protected and conserved in a sustainable manner.</p> <p>Development proposals should: through the use of Planning Conditions minimise the use of mains water in line with the Optional Requirement of the Building Regulations (residential development), achieving mains water consumption of 105 litres or less per head per day (excluding allowance of up to five litres for external water consumption) achieve at least the BREEAM excellent standard for the 'Wat 01' water category or equivalent (commercial development) incorporate measures such as smart metering, water saving and recycling measures, including retrofitting, to help to achieve lower water consumption rates and to maximise future-proofing.</p> <p>London Plan Policy S15</p> <p>Development that results in a new residential dwelling, including conversions, change of use, and extensions that result in a new dwelling unit, will be required to incorporate water conservation measures to achieve maximum water consumption of 110 litres per person per day for homes (including an allowance of 5 litres or less per person per day for external water consumption). A minimum of 2 credits on water consumption will be required for all other types of developments in order to achieve BREEAM "excellent"</p> <p>London Borough of Richmond LP 22</p>	<p>Application B (School) and non-domestic spaces in Development Area 1 of Application A will be provided with water efficient fixtures, fittings and appliances. For the non-domestic elements, two credits are currently being targeted under Wat 01 in BREEAM 2014 New Construction. This approximately equates to water use ratings of:</p> <ul style="list-style-type: none"> <li>- WC = 4.5 l/flush</li> <li>- Hand Basin Taps = 7.5 l/m</li> <li>- Showers = 8 l/m</li> <li>- Urinal = 3 l/Bowl/hour</li> <li>- Kitchenette tap = 7.5 l/m</li> <li>- Dishwashers = 13 l/cycle</li> </ul> <p>All domestic uses within Development Area 1 (Application A), and the School in Application B, will include pulsed-output water meters, with sub-metering where feasible.</p>	<p>Sustainability Statement, pages 4, 19-20, 31, Hoare Lea, March 2022.</p>	<p>The school has achieved the mandatory BREEAM excellent standard for the Wat 01 category, with the minimum 2 credits achieved within the pre-assessment. Furthermore, the applicant has provided some information on its intention to install water efficient fixtures, fittings and appliances, with estimated water consumption ratings provided.</p> <p>The applicant has agreed that the council sets the following planning condition:</p> <ul style="list-style-type: none"> <li>- Prior to the commencement of above ground works, as well as within six months following completion of construction, new construction BREEAM certificates are submitted to the council demonstrating that a minimum of 2 credits has been achieved under the Wat 01 category for the school.</li> </ul>	<p>Recommendation of condition welcomed, subject to wording (to be agreed).</p>

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<p>Development proposals should:</p> <ol style="list-style-type: none"> <li>1. seek to improve the water environment and ensure that adequate wastewater infrastructure capacity is provided</li> <li>2. take action to minimise the potential for misconnections between foul and surface water networks.</li> </ol> <p><i>London Plan Policy S15</i></p>	<p>All spaces at the Proposed Development will be provided with suitable connections to the public foul sewer or combined sewer network, as appropriate</p> <p>Wastewater generation from the Works would include effluent from sanitary facilities, as well as sediment-laden water from excavations, washing down and wheel wash facilities. It is expected that foul water generated at the Site during excavation and construction would be drained via the existing Thames Water combined sewers in the surrounding area. This would result in a minor temporary increase in foul water flows to the Thames Water network, although due to the low volumes expected this is expected to be insignificant.</p> <p>Thames Water confirmation of sufficient capacity: If your proposals progress in line with the details you've provided (drawings ref: WIE SA 92 0004 Rev A05, WIE SA 92 0005 Rev A05, WIE SA 92 0006 Rev A05, WIE SA 92 0007 Rev A05) we're pleased to confirm that there will be sufficient sewerage capacity to serve your development. However, Thames Water has concerns with capacity to the West of the development based on the proposed flows and connection points. We request that the developer updates Thames Water in advance of building phases as they come forwards in order to ensure that any investigative or upgrade works can be carried out before development commences. This confirmation is valid for 12 months or for the life of any planning approval that this information is used to support, to a maximum of three years.</p>	<p>Sustainability Statement, Hoare Lea, March 2022.</p> <p>Environmental Statement Chapter 12: Surface Water Drainage and Flood Risk, page 11, Waterman.</p> <p>Foul Sewage and Utilities Assessment, pages 16-18, Hoare Lea, March 2022.</p>	<p>It is our recommendation that appropriate experts review this application to determine whether the policy has been achieved, as it is outwith the scope of the Energy Strategy/Sustainability Statement. The applicant has provided the following statement, Accelar has no further comments.</p> <p><i>A further update has not been provided by Thames Water but the amendments to the scheme that have been made since 2018 would not constitute a significant change to the drainage strategy. In addition, Thames Water have provided comments on the application. Please refer to the responses from the design team that have been issued to the council for additional information. As part of the next design stages and as part of the phasing of the construction works further dialogue will be had with Thames Water regarding discharge locations, flow rates etc.</i></p>	<p>No further action required.</p>
<p>Development Plans and proposals for strategically or locally defined growth locations with particular flood risk constraints or where there is insufficient water infrastructure capacity should be informed by Integrated Water Management Strategies at an early stage.</p> <p><i>London Plan Policy S15</i></p>	<p>Thames Water: Thank you for your correspondence dated 16th November 2017 regarding the above redevelopment consisting of domestic dwellings, domestic apartments, care home, assisted living apartments, cinema, community facilities, health centre, hotel, management office, retail units, offices and a school.</p>	<p>Foul Sewage and Utilities Assessment, Clean Water Budget Estimate letter from Thames Water, Hoare Lea, March 2022.</p>	<p>It is our recommendation that appropriate experts review this application to determine whether the policy has been achieved, as it is outwith the scope of the Energy Strategy/Sustainability Statement. The applicant has provided the following statement, Accelar has no further comments.</p> <p><i>A further update has not been provided by Thames Water but the amendments to the</i></p>	

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	<p>Please be aware that this report is based upon the details and drawings provided. If there are any subsequent changes to the details and information on your drawing, the contents of this report will become invalid and a new assessment will be needed.</p> <p>As a result of our assessment, we'll need to carry out further investigations before we can more thoroughly assess the requirements for supplying the site.</p> <p>This site will require network modelling analysis to determine the effect of the new demand on the local and strategic network. The cost and duration of this analysis varies according to the complexity of the job and the availability of data for the area. The cost can vary between £2,000 and £35,000, with a report delivery time of up to 30 weeks</p>		<p><i>scheme that have been made since 2018 would not constitute a significant change to the drainage strategy. In addition, Thames Water have provided comments on the application. Please refer to the responses from the design team that have been issued to the council for additional information. As part of the next design stages and as part of the phasing of the construction works further dialogue will be had with Thames Water regarding discharge locations, flow rates etc.</i></p>	
<p>Development proposals referable to the Mayor should calculate whole lifecycle carbon emissions through a nationally recognised Whole Life-Cycle Carbon Assessment and demonstrate actions taken to reduce life-cycle carbon emissions.</p> <p><i>London Plan Policy S12</i></p>	<p>Whole life carbon assessment template submitted for both the outline and detailed planning aspects of the application. See submitted templates for further details.</p>	<p>Whole life carbon report, outline planning stage. Carbon Professional Statement, detailed planning stage.</p>	<p>The applicant has submitted a revised GLA WLC assessment for the entire outline site (including the school application).</p>	<p>No further action required</p>
<p><b>Circular economy.</b></p>				

Policy	Extract from planning documentation	Reference	Accelar comments and recommendations	Applicant responses 15/03/23
<p>A) Resource conservation, waste reduction, increases in material re-use and recycling, and reductions in waste going for disposal will be achieved by the Mayor, waste planning authorities and industry working in collaboration to:</p> <ol style="list-style-type: none"> <li>1. promote a more circular economy that improves resource efficiency and innovation to keep products and materials at their highest use for as long as possible</li> <li>2. encourage waste minimisation and waste prevention through the reuse of materials and using fewer resources in the production and distribution of products</li> <li>3. ensure that there is zero biodegradable or recyclable waste to landfill by 2026</li> <li>4. meet or exceed the municipal waste recycling target of 65 per cent by 2030</li> <li>5. meet or exceed the targets for each of the following waste and material streams:               <ol style="list-style-type: none"> <li>a. construction and demolition – 95 per cent reuse/recycling/recovery</li> <li>b. excavation – 95 per cent beneficial use</li> </ol> </li> <li>6. design developments with adequate, flexible, and easily accessible storage space and collection systems that support, as a minimum, the separate collection of dry recyclables (at least card, paper, mixed plastics, metals, glass) and food.</li> </ol> <p>London Plan Policy SI 7</p>		<p>Operational Waste Management Plan, Stantec, March 2022 Site Waste Management Plan, AECOM, March 2022</p>	<p>The school has been considered as part of the wider proposed development, therefore the same documentation (e.g. Site Waste Management Plan and Operational Waste Management Plan) has been submitted with this application as with the outline application 22/0900/OUT. Therefore, Accelar's comments remain consistent with those provided in the feedback on planning application 22/0900/OUT.</p>	<p>Recommendation of condition welcomed, subject to wording (to be agreed) to provide the following documents during detailed design stages:</p> <ul style="list-style-type: none"> <li>- Site Waste / Resource Management Plan</li> <li>- Cut and fill calculations and/or Excavated</li> <li>- Materials Options Assessment</li> <li>- Building weight calculation</li> <li>- Scenario modelling demonstrating adaptability</li> <li>- Lean design options appraisal</li> <li>- Sustainable Procurement Plan</li> <li>- Detailed End of Life Strategy</li> </ul> <p>It is understood that an updated CES report and template sheet will be provided as part of the detailed application submission.</p> <p>The GLA statement template has been updated and issued alongside this response to include the following amendments following comments from Accelar:</p> <ul style="list-style-type: none"> <li>- align with the numbers presented by AECOM for waste generated during construction</li> <li>- bill of quantities to align with WLC reporting sheet</li> </ul> <p>the Circular Economy Statement has also been updated and issued alongside this response to include the following changes in response to the Accelar comments:</p> <ul style="list-style-type: none"> <li>- Additional detail has been provided to Section 3.4 of the report on reuse of excavation waste.</li> <li>- Additional detail on implementation of the recycled content target has been included within Section 3.4 of the report.</li> <li>- Additional detail on recycling and waste reporting has been included within Section 3.3 of the report.</li> </ul>
<p>B) Referable applications should promote circular economy outcomes and aim to be net zero-waste. A Circular Economy Statement should be submitted, to demonstrate:</p>	<p>Circular economy statement submitted for this outline planning application. See submitted statement for further details.</p>	<p>Circular economy statement, Hoare Lea, August 2022</p>	<p>A separate CE statement is not required for this full application as the size of application is not referable to the Mayor. However, the school development is noted within the outline application CE statement and as such the proposals in the CE statement should apply to the development of the school which is viewed positively.</p>	<p>No response required</p>

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Development Plans that apply circular economy principles and set local lower thresholds for the application of Circular Economy Statements for development proposals are supported. London Plan Policy SI7	N/A+		The Richmond local plan does not include a policy to apply CE statement at the Borough level.	No response required
<b>Energy Strategy</b>				
<p>The Council requires developments to contribute towards the Mayor of London target of 25% of heat and power to be generated through localised decentralised energy (DE) systems by 2025. The following will be required:</p> <ol style="list-style-type: none"> <li>All new development will be required to connect to existing DE networks where feasible. This also applies where a DE network is planned and expected to be operational within 5 years of the development being completed.</li> <li>Development proposals of 50 units or more, or new non-residential development of 1000sqm or more, will need to provide an assessment of the provision of on-site decentralised energy (DE) networks and combined heat and power (CHP).</li> <li>Where feasible, new development of 50 units or more, or new non-residential development of 1000sqm or more, as well as schemes for the Proposal Sites identified in this Plan, will need to provide on-site DE and CHP; this is particularly necessary within the clusters identified for DE opportunities in the borough-wide Heat Mapping Study. Where on-site provision is not feasible, provision should be made for future connection to a local DE network should one become available.</li> </ol> <p>Applicants are required to consider the installation of low, or preferably ultra-low, NOx boilers to reduce the amount of NOx emitted in the borough.</p>	<p>Offsite heating/cooling network By reference to the London Heat Map (<a href="http://www.londonheatmap.org.uk">http://www.londonheatmap.org.uk</a>), the proposed development is not in close proximity to an existing energy network, the closest being some 5.4miles away in Westminster. This is an unavailable connection, with no known plans to develop or extend as far as Richmond. There are opportunities for potential networks in the Hammersmith area although this remains at a distance that is beyond what could be considered reasonable to connect to at 2.3miles. Figure 4.10 shows the area of the site and the potential networks from the London Heat Map.</p> <p>Combined heat and power (CHP) Considering the high proportion of CO2 emissions arising from thermal sources in particular with reference to the dwellings, a gas fired Combined Heat and Power (CHP) system could be suitable for the scheme. However, when considering the decarbonisation of the National Grid and proposed carbon factors in the emerging update to Part L (15th June 2022), a CHP system would result in an increase of on-site emissions (approximately 15% addition to the SAP10 baseline). Furthermore, the presence of on-site combustion plant could have a detrimental impact on local air quality as a result of the Proposed Development. Therefore, for the reasons detailed above, CHP has not been proposed for this energy strategy and no additional savings can be demonstrated at this stage of the energy hierarchy.</p>	<p>Energy Strategy: 6.2 Be Clean: network and technologies</p>	<p>The evidence provided as part of the application is satisfactory. If buildings are connected from some distance to an existing network, as here, the basic disadvantages are:</p> <ol style="list-style-type: none"> <li>Excessive heat losses from the length of pipework</li> <li>Lack of responsiveness to heat demand because the point of demand for the heat is a long distance from the heat source. It would take a significant time for hot water to travel from the heat source to a site 2.3 or 5.4 miles away</li> </ol> <p>Combined Heat and Power (CHP) In this revised application CHP has been removed from the specification and replaced with a strategy of air source heat pumps (ASHP). ASHP is powered by electricity from the national grid and the CO2 emissions per kWh from the generation of grid electricity have reduced by circa 60% over the last 15 years due to removal of fossil fuel generation and the installation of renewable generation. This makes ASHP more “carbon efficient” than CHP. For the purpose of complying with the various policies, this is a sound decision.</p>	<p>No further response required</p> <p>No further response required</p>
<p>Local opportunities to contribute towards decentralised energy supply from renewable and low-carbon technologies will be encouraged where appropriate.</p> <p>London Borough of Richmond LP 22</p>	<p>The key change to the energy strategy sees thermal demand met via on site, centralised ASHP which is considered a low carbon technology which allows the site to benefit from continuous decarbonisation of the national grid throughout its lifetime. The previous strategy included the installation of an energy centre which housed combined</p>	<p>7.1 Low and zero carbon (LZC) technology assessment</p>	<p>Centralised ASHP (Air Source Heat Pump) The use of heat pumps powered by electricity is now considered to be a low carbon technology. The reason for this is that the heat pump, as its name suggests, pumps heat (in this case) from the outside air to the inside of the building, where it is required.</p>	

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	<p>heat and power (CHP) plant to serve the thermal demand. CHP is a combustion technology that uses fossil fuel. This plant type no longer provides the carbon reductions previously anticipated due to decarbonisation of the grid and can have negative impacts on local air quality, therefore this approach was revised. Furthermore, this "all-electric" approach removes combustion plant on site which provides additional benefit to local air quality.</p> <p>Air Source Heat Pumps (ASHP) ASHP are a more flexible form of heat pump compared to GSHP as they comprise of localised units that do not require additional invasive infrastructure like GSHP or WSHP. When assuming an ASHP could operate at Seasonal Energy Efficiency Ratio (SEER) of 4.0 (i.e. four units of useful heat for every unit of electricity consumed), to deliver 100% of space heating and hot water, and 100% of space cooling, it is estimated that a reduction in CO2 emissions of ~931 tonnes per annum could be achieved. This is equivalent to a reduction in regulated CO2 emissions of ~55% beyond the Part L SAP10 gas boiler 'baseline'. A suitable location has been identified within Development Area 1 that can house the ASHP plant to supply both Application A &amp; B to ensure low carbon energy for heating and cooling demand can be met from day 1 of operation. This approach has enabled a centralised system to safeguard roof space for PV technology and biodiverse roof across the site. In addition, the connection to cooled areas via an ambient loop will allow energy sharing across the mixes of uses to further reduce energy demand in summer months. Therefore, for the justification provided and additional benefit of ensuring an all electric strategy to enable ongoing decarbonisation of operational emissions, ASHP has been incorporated into the energy strategy at this stage.</p>		<p>Typically, as assumed here, an ASHP will transfer circa 4 kWh of heat from outside to inside for every 1 kWh of electricity that it uses The evidence provided is sufficient.</p>	
<p>High standards of energy and water efficiency in existing developments will be supported wherever possible through retrofitting. Householder extensions and other development proposals that do not meet the thresholds set out in this policy are</p>	<p>Retrofitting E. High standards of energy and water efficiency in existing developments will be supported wherever possible through retrofitting. Householder extensions and other development proposals that do not meet the thresholds set out in this policy are</p>	<p>London Borough of Richmond Local Plan LP 22 Section 6.3 Sustainable Design and Construction</p>	<p>Application is for the redevelopment of the whole site and is not an existing development therefore this part of the policy is not relevant.</p>	<p>N/A</p>

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<p>encouraged to complete and submit the Sustainable Construction Checklist SPD as far as possible, and opportunities for micro-generation of renewable energy will be supported in line with other policies in this Plan</p> <p>London Borough of Richmond LP 22</p>	<p>encouraged to complete and submit the Sustainable Construction Checklist SPD as far as possible, and opportunities for micro-generation of renewable energy will be supported in line with other policies in this Plan.</p>			
<p>Major development should be net zero-carbon. This means reducing greenhouse gas emissions in operation and minimising both annual and peak energy demand in accordance with the following energy hierarchy:</p> <ol style="list-style-type: none"> <li>1. be lean: use less energy and manage demand during operation</li> <li>2. be clean: exploit local energy resources (such as secondary heat) and supply energy efficiently and clean</li> <li>3. be green: maximise opportunities for renewable energy by producing, storing and using renewable energy on-site</li> <li>4. be seen: monitor, verify and report on energy performance.</li> </ol> <p>London Borough of Richmond LP 22 / London Plan Policy S12</p>	<p>Effective energy metering in line with Be Seen requirements will be enabled by the provision of suitable infrastructure within the buildings services systems.</p> <p>The developed strategy will allow for an exhaustive metering of all the various energy usage in the Proposed Development. Electrical meters will be provided on the main central Air Source Heat Pump(s), providing data on plant energy consumption throughout the year. Each area of high energy load will be sub-metered monitor energy consumption in greater granularity and facilitate reporting. All the main sub-systems (i.e. small power, lighting etc) will be separately monitored and their energy usage separately accounted. Energy intensity and carbon emissions will be monitored and reported annually. The Applicant will also complete the GLA's suggested "Be Seen" energy reporting protocols via the appropriate web portals, at the appropriate stage if required.</p> <p>Too large to copy here but Outlines Renewables, Energy Storage etc.</p>	<p>8.1 Monitoring and Reporting.</p> <p>8.2 Development Monitoring and Reporting Plan</p> <p>8.3 Operational cost: space heating and DHW.</p> <p>Table 19: Performance indicators for Be Seen</p>	<p>The applicant has provided the following additional information.</p> <p>A note has been provided alongside this response with proposed wording for what can be incorporated within the Be Seen section of the strategy as a proposed method of response.</p> <p>The design team have reviewed the roof plan for the school and identified an area of roof that would be suitable for PV installation. A roofplan has been provided alongside this response to show the council where the PV installation could be located. Furthermore, in reference to the potential impact on the green roof, the landscape architect has provided the following commentary:</p> <ul style="list-style-type: none"> <li>- Extensive green roof is a roof with substrate of minimum settled depth of 80mm (or 60mm beneath vegetation blanket) – meets the requirements of GRO Code 2014.</li> <li>- Biodiverse roofs are where seed or plants are introduced into the substrate at the time of construction. A brown roof is where the substrate surface is left to self-vegetate from windblow and bird lime seed dispersal. In both cases, the substrate level is normally up to 150mm, which offers a medium weight build-up. Ideally a surface of varied depths is created to allow for the creation of small pools of water that birds can drink off.</li> </ul> <p>An energy statement addendum has been submitted setting out the Be Lean savings for Development Area 1. The inclusion of the proposed PV and resultant savings.</p> <p>The addition of PV is welcomed.</p>	<p>No further response required</p>
<p>Major development proposals should include a detailed energy strategy to demonstrate</p>	<p>Energy Strategy Rev 00</p>	<p>Energy Strategy Rev 00</p>	<p>An energy statement has been submitted as part of the planning application and used to evidence how the zero carbon target will be</p>	<p>No further response required</p>



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<p>how the zero-carbon target will be met within the framework of the energy hierarchy.</p> <p>London Plan Policy S12</p>			<p>met. It sets out the whole site total, and then the carbon offset payment that is required.</p>	
<p>A minimum on-site reduction of at least 35 per cent beyond Building Regulations is required for major development. Residential development should achieve 10 per cent, and non-residential development should achieve 15 per cent through energy efficiency measures. Where it is clearly demonstrated that the zero-carbon target cannot be fully achieved on-site, any shortfall should be provided, in agreement with the borough, either:</p> <ol style="list-style-type: none"> <li>1. through a cash in lieu contribution to the borough's carbon offset fund, or</li> <li>2. off-site provided that an alternative proposal is identified and delivery is certain.</li> </ol> <p>London Plan Policy S12</p> <p>Developers are required to incorporate measures to improve energy conservation and efficiency as well as contributions to renewable and low carbon energy generation. Proposed developments are required to meet the following minimum reductions in carbon dioxide emissions:</p> <ol style="list-style-type: none"> <li>1. All new major residential developments (10 units or more) should achieve zero carbon standards in line with London Plan policy.</li> <li>2. All other new residential buildings should achieve a 35% reduction.</li> <li>3. All non-residential buildings over 100sqm should achieve a 35% reduction.</li> </ol> <p>From 2019 all major non-residential buildings should achieve zero carbon standards in line with London Plan policy. Targets are expressed as a percentage improvement over the target emission rate (TER) based on Part L of the 2013 Building Regulations.</p> <p>London Borough of Richmond LP 22</p>	<p>I may need to review the SAP/SBEM emissions calculations related documents</p> <p>This repeats above policy</p>	<p>To be determined</p> <p>To be determined</p>	<p>The applicant has provided further explanation to satisfy this query.</p> <p>It is noted that regarding Part L 2021, there have been changes that may affect the compliance of the current design.</p> <p>The applicant has noted that at the time of submission, software to assess 2021 compliance was not yet available therefore, as per the GLA guidance, the energy strategy was produced using Part L 2013 results with SAP10 carbon factors applied. The use of SAP10 carbon factors should allow a better representation of the anticipated carbon emissions in line with Part L 2021.</p>	<p>No further response required</p>
<p>Major development proposals should calculate and minimise carbon emissions from any other part of the development, including plant or equipment, that are not covered by Building Regulations, i.e. unregulated emissions.</p>			<p>The applicant has provided further information, no additional comments.</p>	<p>No response required</p>

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London Plan Policy SI2				
Boroughs and developers should engage at an early stage with relevant energy companies and bodies to establish the future energy and infrastructure requirements arising from large-scale development proposals such as Opportunity Areas, Town Centres, other growth areas or clusters of significant new development	I need to find the document that deals with this	To be determined	Table 7 on page 9 of the Energy Strategy shows anticipated offset payments for both applications. A total of 459 tonnes CO2 will be offset by a payment of £1,307,856. The table does not state whether this is an annual or a "whole life" payment. As previous tables are for annual emissions it is assumed that this is an annual payment.	The carbon offset payment has been calculated based on tCO2 shortfall x £95 x 30 years as per the GLA guidance. Therefore, this should be considered whole life payment.
London Plan Policy SI3				
Major development proposals should calculate and minimise carbon emissions from any other part of the development, including plant or equipment, that are not covered by Building Regulations, i.e. unregulated emissions.	I need to find the document that deals with this	N/A	The applicant has provided a response to close out this query.	No response required
London Plan Policy SI2				
Boroughs and developers should engage at an early stage with relevant energy companies and bodies to establish the future energy and infrastructure requirements arising from large-scale development proposals such as Opportunity Areas, Town Centres, other growth areas or clusters of significant new development	I need to find the document that deals with this	To be determined	The applicant has provided a response to close out this query.	No response required
London Plan Policy SI3				
Major development proposals within Heat Network Priority Areas should have a communal low-temperature heating system: 1. the heat source for the communal heating system should be selected in accordance with the following heating hierarchy: a) connect to local existing or planned heat networks b) use zero-emission or local secondary heat sources (in conjunction with heat pump, if required) c) use low-emission combined heat and power (CHP) (only where there is a case for CHP to enable the delivery of an area-wide heat network, meet the development's electricity demand and provide demand response to the local electricity network) d) use ultra-low NOx gas boilers 2. CHP and ultra-low NOx gas boiler communal or district heating systems should be designed to ensure that they meet the	I need to find the document that deals with this		N/A. No local Heat Network Priority Area.	N/A

Policy	Extract from planning documentation	Reference	Accelar comments and recommendations	Applicant responses 15/03/23
<p>requirements in Part B of Policy SI 1 Improving air quality</p> <p>3. where a heat network is planned but not yet in existence the development should be designed to allow for the cost-effective connection at a later date.</p> <p>London Plan Policy SI3</p>				
<p>Heat networks should achieve good practice design and specification standards for primary, secondary and tertiary systems comparable to those set out in the CIBSE/ADE Code of Practice CP1 or equivalent.</p> <p>London Plan Policy SI3</p>	<p>I need to find the document that deals with this</p>		<p>N/A. No local Heat Network Priority Area.</p>	<p>N/A</p>
<p>Development proposals should minimise adverse impacts on the urban heat island through design, layout, orientation, materials and the incorporation of green infrastructure.</p> <p>London Plan Policy SI4</p>	<p>The model used for the basis of the assessment is outlined in Figure 10. Residential buildings that overheat cause significant discomfort and stress to their occupants and reduce sleep quality. There are several reasons for the increase in overheating risk in residential buildings. Contributing factors include the increase in single aspect building forms (that don't allow sufficient cross-flow ventilation), the trend towards larger areas of glazing, climate change, the urban heat island effect and inadequate means of ventilation.</p>	<p>Appendix C - Overheating analysis.</p>	<p>See comments below for overheating</p>	<p>No response required</p>
<p>Major development proposals should demonstrate through an energy strategy how they will reduce the potential for internal overheating and reliance on air conditioning systems in accordance with the following cooling hierarchy:</p> <ol style="list-style-type: none"> <li>1. reduce the amount of heat entering a building through orientation, shading, high albedo materials, fenestration, insulation and the provision of green infrastructure</li> <li>2. minimise internal heat generation through energy efficient design</li> <li>3. manage the heat within the building through exposed internal thermal mass and high ceilings</li> <li>4. provide passive ventilation</li> <li>5. provide mechanical ventilation</li> <li>6. provide active cooling systems</li> </ol> <p>London Plan Policy SI4</p>	<p>The following mitigation methods will be implemented at the Proposed Development. Minimising internal heat generation through energy efficient design The following mitigation methods will be implemented to minimise the internal heat generation through energy efficient design at the Proposed Development: - Energy efficient lighting (such as LED or CFL) with low heat output - Insulation to heating and hot water pipework and minimisation of dead-legs to avoid standing heat loss (from pipework to dwellings) - Energy efficient white goods with low heat output Reducing the amount of heat entering the building in summer The following mitigation methods will be implemented to reduce the amount of heat entering the building in summer at the Proposed Development: - Suitable glazing ratio responding to orientation and space use - Glazing with shading devices and suitable g-value to limit solar heat gains (where</p>	<p>4.2 Mitigation strategy</p> <p>OVERHEATING RISK ASSESSMENT - SCHOOL</p> <p>BB101 AND CIBSE GUIDE A January 2023</p>	<p>The applicant has provided a BB101 and CIBSE Guide A report for the school. It sets out that a combination of measures proposed in Iteration 1 (reduced g-value) and Iteration 4 (increased ventilation rates), resulted in all assessed rooms meeting Criterion 1 of BB101.</p> <p>Furthermore, as these measures do not require fundamental changes to the aesthetic of the building. It is also recommended that the mechanical ventilation rate is increased to 3ACH, all assessed rooms were able to meet the CIBSE Guide A criteria for the summer months.</p> <p>The report recommends that the combination of Iteration 1 and 4 are used and adopted into the detailed design. The report does not conclude that this is the approach, and so should be made clear this is the adopted approach.</p>	<p>No further action required</p>

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	<p>appropriate) – High levels of insulation and low fabric air permeability which will retain cool air during summer months Passive ventilation The rooms will also benefit from passive solar heating and occupants will be able to adapt their internal environment via openable panels for natural ventilation. Mechanical ventilation All residential spaces, as a minimum will be provided with ventilation rate in accordance with Part F through Mechanical Ventilation with Heat Recovery (MVHR) or through central provision of ventilation also taking advantage of Heat Recovery. MVHR units are an important addition to the building services to maintain good indoor air quality, by providing fresh air to occupied areas and bedrooms and extracting vitiated air from bathrooms and kitchens. Providing fresh air minimises the risk of stale and stagnant air and limits the risk of condensation and mould growth. The heat recovery mechanism will be provided with a bypass to avoid returning hot air to the occupied areas in summer months.</p>		<p>The applicant has responded to say they are happy with an appropriate condition.</p>	