

Former Stag Brewery. Sustainability response.

Application name	Former Stag Brewery
Application number	22/0900/OUT
Proposal description	Hybrid application to include: 1. Demolition of existing buildings (except the Maltings and the façade of the Bottling Plant and former Hotel), walls, associated structures, site clearance and groundworks, to allow for the comprehensive phased redevelopment of the site: 2. Detailed application for the works to the east side of Ship Lane which comprise: a. Alterations and extensions to existing buildings and erection of buildings varying in height from 3 to 9 storeys plus a basement of one to two storeys below ground to allow for residential apartments; flexible use floorspace for retail, financial and professional services, café/restaurant and drinking establishment uses, offices, non-residential institutions and community use and boathouse; Hotel / public house with accommodation; Cinema and Offices. b. new pedestrian, vehicle and cycle accesses and internal routes, and associated highway works c. Provision of on-site cycle, vehicle and servicing parking at surface and basement level d. Provision of public open space, amenity and play space and landscaping e. Flood defense and towpath works f. Installation of plant and energy equipment 3. Outline application, with all matters reserved for works to the west of Ship Lane which comprise <ul style="list-style-type: none"> a. The erection of a single storey basement and buildings varying in height from 3 to 8 storeys b. Residential development c. Provision of on-site cycle, vehicle, and servicing parking d. Provision of public open space, amenity and play space and landscaping e. New pedestrian, vehicle and cycle accesses and internal routes, and associated highways works.
Planning application link	https://www2.richmond.gov.uk/lbrplanning/Planning_CASENO.aspx?strCASENO=22/0900/OUT&DocTypeID=7#docs

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

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Sustainable design and construction				
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: <ul style="list-style-type: none"> - 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. 	See Appendix D of Sustainability Statement, LBRuT sustainability checklist. The development falls under multiple assessment type categories as set out in table 1 and a Shell and Core assessment has been assumed for the Office and Cinema. A 'Fully Fitted' assessment has been assumed for Application B (School). The proposed development is targeting a BREEAM 'Excellent' rating for each of the assessment types outlined below.	Sustainability Statement, pages 30-32, Appendix D, Hoare Lea, March 2022.	As is required by policy, the applicant has included the Sustainable Construction Checklist as an appendix to the Sustainability Statement. However, a couple of clarifications are required: <ul style="list-style-type: none"> - A part of the Checklist appears cut off when compared with the original template on the council's website here. In the template, the column on the far right requiring the "please select" boxes to be filled is not included within the applicant's 	The Checklist has been reviewed and will be resubmitted to support these responses. <ul style="list-style-type: none"> - The end columns had been cropped off when the checklist was pdf'd. This has been corrected. - The scope has been amended to reflect the latest submission

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<p>– New non-residential buildings over 100sqm will be required to meet BREEAM 'Excellent' standard.</p> <p>– 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>– Office Units BREEAM score: 74.0%, 'Excellent'</p> <p>– Cinema BREEAM score: 71.4%, 'Excellent'</p> <p>– School BREEAM score: 72.3%, 'Excellent'</p> <p>BREEAM domestic refurbishment pre-assessment summary: "This draft pre-assessment has been carried out independently by a qualified BREEAM assessor prior to a review by the project design team. This report sets out a route to achieving the target rating and highlights the design team members responsible for each credit issue."</p>		<p>Checklist. This therefore excludes some of the context of what is included in the scheme. Whilst minor, it is recommended that in the interests of comprehensiveness, that the Sustainability Statement is updated with the full details of the Checklist captured, as indicated by policy, or the Checklist is uploaded as a separate file to the planning database.</p> <p>– Could the applicant confirm the scope of the Checklist? It currently states that it captures 571 dwellings. However, the total number of proposed homes across both Development Area 1 and 2 is up to 1,085 according to the Design & Access Statement. Why is there a difference here?</p> <p>Within the Sustainability Statement, the BREEAM new construction focuses on the detailed design submission of Development Area 1. BREEAM pre-assessments have been included for the office units, cinema, and school. This indicates that Excellent is being targeted, aligning with policy. Baseline score / rating: 73.41% equivalent to an 'Excellent' rating.</p> <p>However, the applicant notes that the non-residential elements of Application A, Development Area 1 includes retail space. Yet a BREEAM pre-assessment has not been included for retail. Could the applicant please clarify why this is? At full application stage, a pre-assessment would be expected indicating a score of Excellent can be achieved.</p> <p>For the domestic areas proposed for refurbishment, the applicant has submitted a BREEAM pre-assessment indicating that a rating of Excellent can be achieved, with a score of 73.41%.</p> <p>It is recommended that the council sets planning conditions for:</p> <p>– Development Area 1, detailed design, non- residential: 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 scheme, new construction BREEAM certificates are submitted to the council demonstrating that a score of</p>	<p>The retail space referenced is "flexible space", i.e., not guaranteed to be retail and within that A1, A3/A4, etc. The end use of a space needs to be known to produce a pre-assessment for BREEAM to ensure the correct criteria is considered.</p> <p>It is recommended that a pre-occupation condition be set to ensure these spaces are assessed and certified once the use type is known.</p> <p>This is an acceptable approach, subject to suitable wording. To be closed out as part of a planning conditions/S106 obligation, as appropriate.</p>

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			<p>Excellent has been achieved for the office, cinema, and retail spaces.</p> <ul style="list-style-type: none"> - Domestic refurbishment spaces: at the design (e.g., prior to the commencement of construction works) and as-built (e.g., within six months of works finishing) stages of the scheme, domestic refurbishment BREEAM certificates are submitted to the council demonstrating that a score of Excellent has been achieved for The Maltings, Block 4, and Block 5. 	
<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:</p> <ol style="list-style-type: none"> 1. 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) 2. achieve at least the BREEAM excellent standard for the 'Wat 01' water category or equivalent (commercial development) 3. incorporate measures such as smart metering, water saving and recycling measures, including retrofitting, to help to achieve lower water consumption rates and to maximise futureproofing. <p>London Plan Policy S15 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</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"> - WC = 4.5 l/flush - Hand Basin Taps = 7.5 l/m - Showers = 8 l/m - Urinal = 3 l/Bowl/hour - Kitchenette tap = 7.5 l/m - Dishwashers = 13 l/cycle <p>2.5 credits are also targeted under Wat 01 in BREEAM 2014 Domestic refurb for The Maltings, and a water consumption level of <105 l/p/day will be targeted. It is also anticipated that Development Area 2, Application A would consider the provision of water efficient fixtures, fittings and appliances.</p> <p>The residential spaces for Development Area 1 of Application A will aim to achieve a water consumption rate of 105 litres per person per day. Water efficient fixtures and fittings will be installed to the non-domestic spaces. Tenants will be encouraged to fit-out their spaces appropriately to meet the requirements of the Building Regulations Part G (2013) as a minimum, with the aspiration to achieve a reduction beyond this level for BREEAM credits. The potential for inclusion of</p>	<p>Sustainability Statement, pages 4, 19-20, 31, Hoare Lea, March 2022.</p>	<p>The applicant has committed to achieving the policy target for residential spaces of no more than 105 litres/person/day internal water use. However, there is minimal information on how the applicant intends to achieve this. The strategy and specification for sanitary fittings will be established during the next stage of design.</p> <p>The non-domestic and refurbishment spaces achieve the mandatory BREEAM excellent standard for the Wat 01 category, with the minimum 2 credits achieved within the pre-assessment for the office, school, cinema, and refurbishment spaces. Information is provided on how this will be achieved for the non-domestic spaces, including water efficient fixtures, fittings, and appliances. Water use ratings have been provided for these.</p> <p>The same query arises here around why is the retail space excluded from the BREEAM pre-assessment? It is impossible to know whether it achieves the minimum 2 credits under Wat 01 without it. Can the applicant please clarify this?</p> <p>It is noted within the Sustainability Statement that the inclusion of rainwater harvesting will be further investigated at the detailed design stage.</p> <p>It is recommended that the council sets planning conditions in relation to water efficiency, as is required by policy S15 of the London Plan. Planning conditions should capture:</p> <ul style="list-style-type: none"> - Residential (for both Development Area 1 and Development Area 2): Prior to the 	<p>The retail space referenced is "flexible space", i.e., not guaranteed to be retail and within that A1, A3/A4, etc. The end use of a space needs to be known to produce a pre-assessment for BREEAM to ensure the correct criteria is considered. It is recommended that a pre-occupation condition be set to ensure these spaces are assessed and certified once the use type is known.</p> <p>This is an acceptable approach, subject to suitable wording. To be closed out as part of a planning conditions/S106 obligation, as appropriate.</p>

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<p>order to achieve BREEAM “excellent”</p> <p>London Borough of Richmond LP 22</p>	<p>rainwater harvesting would be further investigated at detailed design stage. 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. Non-domestic units will be metered by tenancy, and tenants will be encouraged to fit sufficient submeters to identify different areas of use such as toilets, kitchens, and showers. Sub- metering would also be considered for inclusion in Development Area 2, (Application A) where feasible.</p> <p>2 credits achieved under Wat 01: Water Consumption for the office, cinema, and school.</p>		<p>commencement of above ground works, as well as following completion of construction, evidence (e.g., water calculator with schedule of water fittings/fixtures installed with associated flow rates) is submitted that indicates that mains water has been reduced as far as possible and achieves no more than 105 litres/person/day. Information on how this has been achieved, including measures implemented, should be included.</p> <ul style="list-style-type: none"> - Non-domestic spaces: the following planning condition recommendation links in with the BREEAM condition recommendation above. 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. - Refurbishment spaces: the following planning condition recommendation links in with the BREEAM condition recommendation above. Prior to the commencement of above ground works, as well as within six months following completion of construction, domestic refurbishment BREEAM certificates are submitted to the council demonstrating that a minimum of 2 credits has been achieved under the Wat 01 category for The Maltings, Block 4, and Block 5. 	
<p>Development proposals should:</p> <ul style="list-style-type: none"> - seek to improve the water environment and ensure that adequate wastewater infrastructure capacity is provided - take action to minimise the potential for misconnections between foul and surface water networks. <p>London Plan Policy SI5</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>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>Within the Foul Sewage and Utilities Assessment, a letter is included by Thames Water, dated May 2018, which states that Thames Water has sufficient sewerage capacity to serve the development. However, it has concerns with capacity to the West of the development (assumed area of the outline application) based on proposed flows and connection points. Thames Water requested that the applicant provides an update in advance of building phases in order to confirm any investigative or upgrade works required before the development commences. Has further correspondence been undertaken with Thames Water to resolve this matter? Policy SI5 states “development proposals should</p>	<p>The information provided in the Foul Sewage and Utilities Assessment document that was submitted as part of the application is still valid. Whilst there have been amendments to the scheme since 2018 the overall water infrastructure requirements are still similar to what was required then. 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 about the required flow rates and associated connection points.</p> <p>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</p>

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	<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 to ensure that any investigative or upgrade works can be carried out before development commences.</p> <p>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>take action to minimise the potential for misconnections between foul and surface water networks." Can the applicant please confirm how this action has been taken?</p> <p>Furthermore, this letter is dated 2018. Thames Water state that the confirmation that there is sufficient sewerage capacity for the development (presumably development area 1) would be valid for a maximum of three years. It is therefore out of date. Clarification is required on whether the applicant has had further correspondence with Thames Water on this matter, particularly as there have been amendments to the design since 2018.</p>	<p>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.</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>London Plan Policy S15</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>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</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 out with the scope of the Energy Strategy/Sustainability Statement. For example, infrastructure engineers, environment statement reviewers, or water infrastructure experts. Accelar has provided a few observations which the council may want to consider along with the expert advice previously referenced.</p> <p>The applicant has provided a letter by Thames Water dated November 2017. It states that further investigation is needed to assess the requirements of supplying clean water to the proposed development. Has this further investigation been undertaken to confirm that there is sufficient capacity? Furthermore, this letter is likely to have been based on a previous iteration of the development. Has Thames Water provided an updated letter with recommendations based on the most up to date design of the proposed development? It is recommended that the council seeks clarification on these matters and consults further expert advice as previously mentioned.</p>	<p>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.</p>

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	can vary between £2,000 and £35,000, with a report delivery time of up to 30 weeks			
<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>London Plan Policy S12</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>Whilst the applicant has submitted whole life carbon assessments for both the outline and detailed planning submissions, an outdated version of the GLA's Whole Life-Cycle Carbon Assessment (WLC) template has been used. The most up to date version can be found on the Mayor's website here. As a result, key details are missing. Namely, the updates to the old template which are included in the most recent version and are outlined in tab "Updates". A selection of the updates include:</p> <ul style="list-style-type: none"> - Confirmation relating to proportion of material quantities included relating to cost - Confirmation of third-party mechanisms - Confirmation that the assessment has or can be submitted to the Built Environment Carbon Database - Updated assessment summary results to align with new WLC benchmarks - Removal of assessment 2 (which the applicant is currently using in the WLC assessments submitted). <p>It is recommended that the council requests the applicant to re-submit the Whole Life-Cycle Carbon (WLC) Assessment using the most up to date template.</p> <p>Furthermore, it is requested that the applicant provides a narrative within the "Comparison with WLC benchmarks" box in the template as required by the Mayor's WLC guidance which states; "All developments, regardless of their scope, are expected to compare their WLC baseline against the most relevant benchmark. If the WLC emissions of a development falls outside the range of the benchmarks (whether they are higher or lower), applicants should explain why in the relevant text box of the template."</p> <p>Based on the WLC figures submitted, they appear significantly below the benchmarks included in Appendix 2 of the Mayor's WLC</p>	<p>The Whole Life Carbon assessment has been updated and reported within the latest version of the Mayor's WLC Assessment tool. A copy has been provided alongside this response as well as a cover note to responded to the additional guidance criteria.</p>

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			assessment guidance. This needs to be explained within the template.		
Circular economy					
<p>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"> 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 2. encourage waste minimisation and waste prevention through the reuse of materials and using fewer resources in the production and distribution of products 3. ensure that there is zero biodegradable or recyclable waste to landfill by 2026 4. meet or exceed the municipal waste recycling target of 65 per cent by 2030 5. meet or exceed the targets for each of the following waste and material streams: <ol style="list-style-type: none"> a. construction and demolition – 95 per cent reuse/recycling/recovery b. excavation – 95 per cent beneficial use 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. <p>London Plan Policy SI 7</p>	<p>Circular economy statement, Hoare Lea, March 2022</p>	<p>Circular economy statement, Hoare Lea, March 2022</p>	<p>This section is labelled red due to queries against parts 3 and 5 of London Plan Policy SI 7.</p> <p>As a planning application that is preferable to the Mayor, there is mandatory requirement for a circular economy (CE) statement for the outline planning application where this policy statement is considered in detail. Please see comments below on London Plan Policy SI7 part B.</p> <p>No evidence to support part 3 of the policy can be found please can this be supplied.</p>	<p>It is assumed that this comment relates to Part B.3: Opportunities for managing as much waste as possible on site.</p> <p>Please refer to section 3.4 Waste during demolition and construction of the Circular Economy Statement for the response to the this section of the policy.</p>	
	<p>The main operational waste management targets that apply to this development, include:</p> <ul style="list-style-type: none"> - To increase the recycling and composting of municipal waste by 65% by 2030 - To increase the recycling, composting and reuse of C&I waste by 70% by 2020. 	<p>Operational Waste Management Plan, Stantec, March 2022</p>			<p>This target is in line with the London Plan. It is suggested that the applicant considers the recommendations of a research project by Resource London, Making recycling work for people in flats and associated toolkit.</p>
		<p>These waste quantities have been calculated prior to the implementation of any on-Site management measures. Therefore, details of the CD&E programme currently available is high level and is subject to change. However, it is assumed that through following the Site waste management guidance detailed within this Plan a minimum of 70% of non- demolition waste and 80% of demolition waste can be diverted from landfill; and in practice a higher diversion rate could be achieved. The London Plan target is for 95% of all CD&E waste to be diverted from landfill: it is anticipated that the project will either meet or contribute towards meeting this target.</p>	<p>Site Waste Management Plan, AECOM, March 2022</p>	<p>These targets are not in line with the London Plan. The application states that a minimum of 70% of non- demolition waste and 80% of demolition waste can be diverted from landfill, whilst the London Plan target is 95% in both cases. It is recommended that the Council asks the applicant to review their site waste management plan accordingly.</p>	<p>The applicant confirms a commitment to target the London Plan targets for diversion of waste from landfill. This will be captured within the Circular Economy Statement for Detailed Design. Please refer to Table 3 of the CES demonstrating this commitment.</p>
		<p>Residential units in Development Area 1 have been designed to incorporate appropriate spaces to enable a large proportion of the waste arising to be separated for recycling and as a result reducing the amount of waste requiring disposal. (In accordance with LBRuT's Refuse</p>	<p>Operational Waste Management Plan, Stantec, March 2022</p>		

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	<p>and Recycling Storage Requirements SPD (2015)) The storage requirements for the non-residential uses in Development Area 1 have been based on the guidance outlined in LBRuT's Refuse and Recycling Storage Requirements SPD (2015). Although this SPD only provides specific guidance on the storage requirements for offices, the same principles have been applied to the cinema, retail units, café/restaurants and community facilities, to ensure that the storage facilities will be sufficiently large enough to accommodate for the expected weekly arisings of waste.</p> <p>The residential units in Development Area 2 will be designed to incorporate appropriate spaces to enable a large proportion of the waste arising to be separated for recycling and as a result reducing the amount of waste requiring disposal. 5.3.2 In accordance with the guidelines set by LBRuT, separate recycling bins and general waste bins will be allocated for:</p> <ul style="list-style-type: none"> - General waste - Mixed paper, card and carton recycling bins - Mixed container recycling bins for plastic, tins, unbroken glass and aerosols. 		<p>It is suggested that the applicant considers the recommendations of a research project by Resource London, Making recycling work for people in flats and associated toolkit.</p>	<p>This recommendation will be considered during detailed design stages.</p>
<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> <ol style="list-style-type: none"> 1. how all materials arising from demolition and remediation works will be re-used and/or recycled 2. how the proposal's design and construction will reduce material demands and enable building materials, components and products to be disassembled and re-used at the end of their useful life 3. opportunities for managing as much waste as possible on site 4. adequate and easily accessible storage space and collection systems to support recycling and re-use 5. how much waste the proposal is expected to generate, and how and where the waste will be managed in accordance with the waste hierarchy 	<p>Circular economy statement submitted for this outline planning application. See submitted statement for further details.</p>	<p>Circular economy statement, Hoare Lea, March 2022</p>	<p>Whilst the applicant has submitted a circular economy statement for both the outline and detailed planning submissions, an outdated version of the GLA's Circular Economy Statement guidance has been used. The most up to date version can be found on the mayor's website here. The main element that is missing is the CE template spreadsheet that sits alongside a written report. The template allows for mapping of circular economy plans and activity at each planning stage and post construction. Areas included in the spreadsheet template at the outline application stage that have not been addressed in the current written circular economy statement include:</p> <ul style="list-style-type: none"> - estimated bill of materials details (should use same data as for Whole Life Cycle Carbon Assessment) - estimated recycling and waste reporting (there could be a useful link to the Site 	<p>The planning application was submitted prior to the adoption of the latest guidance. However, the circular economy statement has been updated to reflect the new guidance.</p>

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<p>6. how performance will be monitored and reported.</p> <p>London Plan Policy S17</p>			<p>Waste Management Plan, AECOM, March 2022)</p> <ul style="list-style-type: none"> - circular economy targets and planned performance monitoring (current statement only considers targets for diversion from landfill for the demolition and construction stage and diversion from landfill of municipal waste when the site is in operation - there are further targets on excavation waste materials and recycled content to be included) <p>All sections require more detailed responses.</p> <p>It is recommended that the council requests the applicant to re-submit the Circular Economy Statement using the most up to date guidance and template.</p>	
	<p>The circular economy statement will seek to meet the contents described in the GLA guidance document for the scheme in sufficient detail for the detailed and outline stages of the masterplan appropriately.</p>	<p>Circular economy statement, Hoare Lea, March 2022</p> <p>Stag Brewery Planning Brief - Appendix 1 map Masterplan and detailed design and access statement pg. 18</p>	<p>It is recommended that the council informs the applicant that the CE statement submit at the outline stage will not be sufficient at the detailed application stage.</p> <p>Furthermore:</p> <ol style="list-style-type: none"> 1. a condition should be attached to an approval of a referable outline planning permission, securing the submission of a CE statement with each reserved matters application. Applications for reserved matters should review and address the information provided at outline stage and update any default values used as far as possible as set out in the guidance. 2. the CE statement guidance states that 'as the application consists of multiple buildings, and different CE design approaches are being adopted, this should be reflected in the Project Details table of the template (number of use types, and floor area by use class/type must be provided). The written report should explain the different approaches being adopted for different buildings or aspects, with reference to a site plan'. This would enable the applicant to add extra detail on the buildings that are being retained in the application which is not currently captured within the Table 2: Strategic approach of the current statement. 	<p>An updated CES has been produced following the comments received and has been issued alongside these responses</p> <ol style="list-style-type: none"> 1. The Applicant supports the proposed condition, subject to review of wording agreed between the Applicant and the Local Authority. 2. The Circular Economy Approach, detailed in Section 3 of the CES provides detail on the context of the site, specifically where buildings and/or materials are being retained and where building will be newly constructed.

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			<p>Before the applicant reviews the CE statement in line with the latest guidance it is recommended that the council consider whether compliance is sufficient in this case or whether they want to encourage a higher level of ambition (known as pioneering CE statements in the guidance).</p> <ol style="list-style-type: none"> 1. the CE guidance states that early collaboration can support CE outcomes being achieved and embedded. Applicants are encouraged to set out how the CE workshop has informed the design of the development at the pre-application stage. It is recommended that the Council ask the applicant what collaborative work has been undertaken up until this outline stage. 2. it is recommended that the council sets planning conditions for the following documents referenced in the CE statement: <ol style="list-style-type: none"> a. the completion and adoption of the functional adaptation strategy study b. the completion and adoption of a sustainable procurement plan pertaining to the site. 3. consideration should be given to the inclusion of circular economy opportunities at the community hub/space including the installation of a Library of Things, enabling residents to rent items at low cost instead of owning and storing them at home. 	<p>As the application consists of a hybrid development, there will be opportunities to further review and enhance the CES' as part of the Reserved Matters Applications for the later phases. Viability of "pioneering" approaches will continue to be reviewed, however is not a policy requirement.</p> <ol style="list-style-type: none"> 1. As part of the July 2020 application, a Circular Economy Method Statement was produced by Hoare Lea and circulated to the team for comment and review. Feedback from the design team on this statement was used to develop the CES for the previous application. The changes to the proposed new scheme compared to the previous iteration includes changes to massing and building height to protect and enhance the historic value of the listed buildings present on the site. The CES was updated to reflect these changes to design and identify opportunities for CES approaches to be incorporated from the previous iteration as well as identify where new measures could be included within the strategy. 2. The recommendation of this condition is welcomed by the Applicant, subject to agreement of wording between the Applicant and LBRuT. 3. The recommendation of the opportunities proposed for the community hub are welcomed, however will need to be discussed and agreed with the hub occupant/facilities manager once identified.
Energy & emissions				
<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"> 1. 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. 2. Development proposals of 50 units or more, or new non-residential 	<p>Offsite heating/cooling network by reference to the London Heat Map (http://www.londonheatmap.org.uk), 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.</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"> 1. Excessive heat losses from the length of pipework 2. 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 	<p>No action required.</p>

Policy	Extract from planning documentation	Reference	Accelar comments and recommendations	Applicant responses
<p>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).</p> <p>3. 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.</p> <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>Local opportunities to contribute towards decentralised energy supply from renewable and low-carbon technologies will be encouraged where appropriate.</p>	<p>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.</p> <p>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><u>CHP</u> In this revised application CHP has been removed from the specification and replaced with a strategy of air source heat pumps (ASHP).</p> <p>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.</p> <p>For the purpose of complying with the various policies, this is a sound decision.</p>	<p>No action required.</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 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.,</p>	<p>7.1 Low and zero carbon (LZC) technology assessment</p>	<p><u>Centralised ASHP (Air Source Heat Pump)</u> The use of heat pumps powered by electricity is now considered to be a low carbon technology.</p> <p>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> <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</p> <p>The evidence provided is sufficient.</p>	<p>No action required.</p>

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	<p>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 & 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>High standards of energy and water efficiency in existing developments will be supported wherever possible through retrofitting.</p> <p>Householder extensions and other development proposals that do not meet the thresholds set out in this policy are 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>	N/A	N/A	Application is for the redevelopment of the whole site and is not an existing development therefore this part of the policy is not relevant.	N/A
<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"> 1. be lean: use less energy and manage demand during operation 	<p>Entire energy provides support for this. In its conclusion it sets out 'The strategy has been developed using the 'Be Lean, Clean and Green' energy hierarchy which utilises a fabric first approach to maximise reduction in energy through passive design measures'.</p> <p>Be Lean: -10% sitewide betterment achieved against GLA gas boiler baseline. Highly</p>	Energy Statement, section 5 Be Lean, 6 Be Clean, 7 Be Green, 8 Be Seen.	<p>The Energy Statement sets out the schemes approach to the energy hierarchy in a clear way.</p> <p><u>Be Lean:</u> The two requirements of 10% and 15% carbon emission reduction have been achieved for residential and non-residential properties respectively.</p>	No action required.

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<p>2. be clean: exploit local energy resources (such as secondary heat) and supply energy efficiently and clean</p> <p>3. be green: maximise opportunities for renewable energy by producing, storing and using renewable energy on-site</p> <p>4. be seen: monitor, verify and report on energy performance.</p> <p>London Borough of Richmond LP 22 / London Plan Policy S12</p>	<p>energy efficient building fabric and building services have been utilised to reduce carbon emissions and energy demand through good practice passive measures.</p> <p>Be Clean: No additional savings at the Be Clean stage A centralised approach to energy supply will be available via an ambient loop using heat pump technology. As no connection to an existing DHN or installation of CHP is proposed, no additional savings can be demonstrated at this stage.</p> <p>Be Green: A further ~63% sitewide betterment achieved through LZC technologies. Thermal and cooling demand supplied via on site centralised ASHP and the incorporation of a photovoltaic array further reduces and offsets the proposed development's carbon emissions respectively.</p> <p>Be Seen: states that additional measures that will be adopted during operation to ensure the risk of performance gap is reduced and high energy performance as designed is maintained throughout the Proposed Development's lifetime".</p>		<p><u>Passive design measures:</u> G-value or "energy transmittance" i.e., heat gains through glazing value is low. 0.29. Anything below 0,5 is considered to be solar control glazing to this value is extremely good, i.e., it will contribute to the prevention of overheating.</p> <p>Fabric insulation levels achieving improvements over Part L of 25% to 100%. Fabric air permeability levels achieving improvements over Part L of 75% for dwellings and 70% for non- dwellings</p> <p>Overall, for the "Be Lean" requirements, CO2 emissions have been reduced by 10.3% over the Part L requirements</p> <p><u>Be Clean:</u> Be Clean refers to reducing grid electricity and natural gas consumption through on-site utilisation of decentralised energy (DE) (heating and cooling) networks and the installation of CHP.</p> <p><u>Decentralised Energy</u> Existing heat networks are approximately 2.3km to 5.4 km distant from this development and it would not be feasible to connect to then due to heat losses and lack of responsiveness due to the distance and the time it takes for the water to flow.</p> <p><u>Be Green:</u> Be Green relates to the utilisation of Low and Zero Carbon technologies (LZC). An appraisal of LZT has been carries out, i.e., solar thermal, photovoltaics, biomass boilers, heat pumps and wind turbines. Of these photovoltaics and air source heat pumps have been selected for use at the development.</p> <p><u>Air Source Heat Pumps (ASHP)</u> ASHP give zero emissions on site and much reduced emissions compared with the considered alternative of CHP: Emissions Comparison with CHP</p> <table border="1" data-bbox="1760 1761 2237 1929"> <thead> <tr> <th data-bbox="1760 1761 2050 1818">Energy Conversion Device</th> <th data-bbox="2059 1761 2139 1818">CHP</th> <th data-bbox="2148 1761 2237 1818">ASHP</th> </tr> </thead> <tbody> <tr> <td data-bbox="1760 1824 2050 1881">Energy Type</td> <td data-bbox="2059 1824 2139 1881">Natural Gas</td> <td data-bbox="2148 1824 2237 1881">Electricity</td> </tr> <tr> <td data-bbox="1760 1887 2050 1929">CO₂ Emissions per kWh Input</td> <td data-bbox="2059 1887 2139 1929">0.18316</td> <td data-bbox="2148 1887 2237 1929">0.21233</td> </tr> </tbody> </table>	Energy Conversion Device	CHP	ASHP	Energy Type	Natural Gas	Electricity	CO ₂ Emissions per kWh Input	0.18316	0.21233	
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			<table border="1" data-bbox="1762 359 2237 520"> <tr> <td>Typical Conversion Efficiency to Useful Energy</td> <td>0.9</td> <td>4.0</td> </tr> <tr> <td>CO₂ Emissions per kWh Useful Energy</td> <td>0.2035</td> <td>0.0531</td> </tr> <tr> <td>% Emissions compared with CHP</td> <td>100.0%</td> <td>26.1%</td> </tr> </table> <p>Notes:</p> <ol style="list-style-type: none"> The "CO₂ Emissions per kWh Input" figures for electricity and natural gas are taken from the latest (2021) version of the UK Government GHG Conversion Factors for Company Reporting The "Typical Conversion Efficiency to Useful Energy" has been assumed as 0.9 (90%) for a CHP unit and 4.0 (or 400%) for an ASHP unit. Note that the ASHP can be over 100% because it is pumping heat from outside The CO₂ Emissions per kWh Useful Energy is calculated by dividing the "CO₂ Emissions per kWh Input" by the "Typical Conversion Efficiency to Useful Energy" <p>From these assumptions and calculations it is estimated that the CO₂ emissions per kWh of useful energy when utilising ASHP is only 26.1% of that when utilising CHP.</p> <p><u>Photovoltaics</u> Having considered the available roof space and the solar irradiation for the location, it has been determined that the calculated electricity generation will reduce CO₂ production for the development by 8% beyond the Part L baseline.</p> <p>The writer would agree that photovoltaics are an effective method of contributing to the achievement of the emissions requirements of Part L and the London Plan.</p> <p><u>Be Seen:</u> "Be Seen" is seeking a high standard and suggest continuous monitoring and analysis of energy consumption & performance. It is stated that "suitable infrastructure" will be provided.</p>	Typical Conversion Efficiency to Useful Energy	0.9	4.0	CO ₂ Emissions per kWh Useful Energy	0.2035	0.0531	% Emissions compared with CHP	100.0%	26.1%	
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			<p>Annual reporting on "energy intensity and carbon emissions" is required but the writer could not see reference to more frequent monitoring and analysis. Typically monitoring frequencies would be weekly or monthly.</p>	<p>The comments are welcome and will be considered further as the Be Seen strategy is developed at detailed design (i.e. RIBA Stages 3-4). However, the current stage of design</p>									

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			<p>To enable meaningful analysis a “driver” of energy consumption should be identified and in dwellings the major driver is outside temperature. All other energy use in dwellings is likely to be regular, with continuous occupation and regular hours of energy using equipment use.</p> <p>To calculate a meaningful analysis therefore energy consumption can be modulated using “degree days” and thus energy usage meaningful monitored by removing the effects of outside temperature.</p> <p>Degree days can either be measured and calculated using an onsite “weather station”, appropriately located and protected by a “Stephenson Screen” or data can be obtained through subscription.</p> <p>Without normalising for outside air temperature, much of the monitoring analysis could be meaningless.</p> <p>Another monitoring issue not mentioned in the Energy Strategy is heat meters. Indeed, heat meters could, on the face of it, be a requirement under the Heat Network (Metering and Billing) Regulations. Otherwise, how will heat be charged for to the residents? Heat meters would also enable monitoring of the performance of the heat pumps.</p> <p>Table 19 – “Delivered efficiency of each heating/ cooling) generation plant (%) – % of heat supplied from each heating/ cooling generation plant” also suggests measurement of the heat delivered by the heat pumps, i.e. the installation of heat meters. This should be clarified.</p>	<p>(i.e., RIBA Stage 2) cannot respond to this comment at this time in full.</p>
<p>Major development proposals should include a detailed energy strategy to demonstrate how the zero-carbon target will be met within the framework of the energy hierarchy.</p> <p>London Plan Policy S12</p>	<p>9.4 Whole site total (Application A and B) 9.5 Carbon offset payment.</p> <p>Ultimately, the reference to the Greater London Plan on Page 32 of the Energy Strategy quotes from the Plan stating: Revised Proposed Developments to demonstrate a pathway to zero carbon on-site by 2050, with any short fall to the net-zero target covered by either.</p> <ul style="list-style-type: none"> - Cash in lieu payments to the borough’s carbon offset fund, or 	<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 met. It sets out the whole site total, and then the carbon offset payment that is required.</p>	<p>No response required</p>

Policy	Extract from planning documentation	Reference	Accelar comments and recommendations	Applicant responses
	<ul style="list-style-type: none"> Off-site (offsetting) provided that an alternative proposal is identified, and delivery is certain. 			
<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"> through a cash in lieu contribution to the borough's carbon offset fund, or off-site provided that an alternative proposal is identified and delivery is certain. <p>London Plan Policy SI2</p>	<p>When considering the whole site, it is anticipated that a ~73% overall reduction in CO2 emissions beyond the Building Regulations Part L 2013 'baseline' can be achieved.</p>	<p>Energy Statement section. Lean Calculation Documents Green Calculation Documents</p>	<p>Compared with the 35% beyond Building Regulations requirements: The applicant sets out an overall reduction of approximately 73% beyond the Building Regulations.</p> <p>A review of the documentation has prompted the following queries:</p> <ul style="list-style-type: none"> The Lean Calculations and the Green Calculations appear to be very similar, being SAP Calculations and are a requirement for Part L of the Building Regulations. Both Lean Calculations and Green Calculations Parts 1 to 6, 9, 11 & 12 indicate "General Requirements Compliance" is a "Fail". This requires explanation. Further, non-dwelling requires a different Part L Target Emissions protocol, SBEM (rather than SAP for dwellings). The writer could not locate these amongst the SBEM calculations documents on the planning portal. Could the applicant please point out where the location of the SBEM calculations? 	<ul style="list-style-type: none"> The SAP worksheets that were issued as part of the application consist of the same passive/energy efficiency measures but with differing heating strategies at each stage, i.e. gas boiler for Be Lean, ASHP for Be Green. Looking at one dwelling in isolation (B06-TY-03_3): <ul style="list-style-type: none"> DER (Lean) – 15.21 DER (Green) – 10.64 As seen above, there is a considerable variance in improvement between calculations. As the residential areas consist of apartment blocks, from a Building Control perspective, compliance can be demonstrated on a block/area weighted basis rather than for each individual dwelling. Furthermore, the proposed development will require compliance with Part L 2021, now adopted, therefore calculations will be updated to reflect the new regulations. The BRUKL reports for the non-domestic areas have been reissued alongside this response for ease of reference.
<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"> All new major residential developments (10 units or more) should achieve zero carbon standards in line with London Plan policy. All other new residential buildings should achieve a 35% reduction. All non-residential buildings over 100sqm should achieve a 35% reduction. 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>London Borough of Richmond LP 22</p>			<p>It was not possible, on the face of it, to determine how the 35% beyond Building Regulations requirement has been achieved, along with the further the 10% residential development requirement and the 15% non-residential requirement. Could the applicant please advise.</p>	<p>Please refer to the GLA energy reporting tool that has been updated and resubmitted alongside this response for clarity. This tool has been produced using the direct outputs from the SAP and BRUKL worksheets and area weighted (where required) to calculate the predicted emissions for the detailed areas of the site. Assuming that, as a minimum, the outline elements of the application will follow the same strategy and performance of the Detailed elements, the site wide predicted emissions have been calculated using area weighted emissions based on the detailed application.</p>

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<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>London Plan Policy SI2</p>			<p>The unregulated emissions are listed in the various Tables 1-6, 22-25 and 28. Would the applicant please explain how these emissions were calculated?</p>	<p>The unregulated emissions have been calculated as part of the Part L assessment. For commercial areas, this is taken as "Equipment" as shown in the BRUKL report, and for residential the SAP worksheets provide figures for cooking and equipment.</p>
<p>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</p> <p>London Plan Policy SI3</p>	N/A	N/A	<p>This information was not readily available in the Energy Statement, can the applicant confirm where this is evidenced.</p>	<p>Correspondence was had as part of the previous submission of the development. This has been provided alongside this response. (ref: MEM-2310513-5A-GJ-20181108-Responses to GLA-Rev C)</p>
<p>Major development proposals within Heat Network Priority Areas should have a communal low-temperature heating system:</p> <ol style="list-style-type: none"> 1. the heat source for the communal heating system should be selected in accordance with the following heating hierarchy: <ol style="list-style-type: none"> 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 requirements in Part B of Policy SI 1 Improving air quality 3. where a heat network is planned but not yet in existence the development should be designed to allow for the cost-effective connection later. <p>London Plan Policy SI3</p>	N/A. No local Heat Network Priority Area.	N/A	N/A. No local Heat Network Priority Area.	N/A
<p>Heat networks should achieve good practice design and specification standards for primary, secondary and tertiary systems</p>	N/A. No local Heat Network Priority Area.	N/A	N/A. No local Heat Network Priority Area.	N/A

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<p>comparable to those set out in the CIBSE/ADE Code of Practice CP1 or equivalent.</p> <p>London Plan Policy SI3</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>The results demonstrate that based on the updated design and parameters used within this report, the majority all assessed dwellings are able to meet the TM59 criteria for DSY1 climate based on a hybrid ventilation strategy and 'black out' blinds. In regard to the communal corridors, as they are internal to the core of the building (i.e. no windows) they will rely on mechanical ventilation to meet the criteria. If this is provided, the criteria can be met. The Energy Strategy also states that "A TM59 analysis of the dwellings and residential accommodation was also undertaken to assess the risk of overheating". The CIBSE TM59 standard specifies a method for determining the likely internal temperatures of a residential property. It includes hours of occupancy, internal heat gains from equipment for bedrooms, living rooms, and kitchens, and internal heat gains from inhabitants as input data for the energy modeller. The TM59 is summarised within the Energy Statement, but it would be beneficial to have this document as part of the planning application, this could not be found.</p>	<p>Appendix C - Overheating analysis.</p>	<p>The GLA domestic overheating checklist has been completed (Table 34 Energy Strategy). The TM59 analysis has also been successfully conducted.</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"> 1. reduce the amount of heat entering a building through orientation, shading, 	<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</p>	<p>4.2 Mitigation strategy</p>	<p>The approach to minimising potential for internal overheating is sound, i.e.</p> <ol style="list-style-type: none"> a. Reduce solar heat gains b. Reduce internal heat gains c. Controllable ventilation, either occupant controlled natural ventilation or mechanical ventilation with heat recovery 	<p>No response required.</p>

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<p>high albedo materials, fenestration, insulation and the provision of green infrastructure</p> <ol style="list-style-type: none"> 2. minimise internal heat generation through energy efficient design 3. manage the heat within the building through exposed internal thermal mass and high ceilings 4. provide passive ventilation 5. provide mechanical ventilation 6. provide active cooling systems <p>London Plan Policy S14</p>	<p>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 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>Heat recovery can be bypassed in summer to avoid returning warm air into the building.</p>	