

**GABRIEL BERRY-KHAN**

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Dear Gabriel,

**RE: 551-557 FINCHLEY ROAD – ENERGY, SUSTAINABILITY AND AIR QUALITY**

This letter provides a response and further clarifications requested by Haringey in their emails dated on 16 April 2020 which commented on the submission for 551-557 Finchley Road.

XCO2 has provided a response to the Energy, Sustainability and Air Quality related comments provided.

**ENERGY**

Camden have made the following comments and XCO2's responses are provided below each comment in blue:

“Major commercial refurbishment/conversion, treated as deep refurbishment/new-build assessed under L2A – conversion of offices/industrial/retail/other/institution to hotel (1309 m<sup>2</sup> – 33no. guest rooms), office (177 m<sup>2</sup>) & shop (22 m<sup>2</sup>). Total area 1508 m<sup>2</sup>.”

The proposed development is over 100m<sup>2</sup> but the extensions do not appear to exceed 25% of the total useful floor area of the development. As a result of the limited portion of new-build elements, Part L2B should be used and Building Control have confirmed this to be the applicable version of the Building Regulations for the scheme. Correspondence with Building Control can be found at end of this letter.

Energy (CC1)

Policy requirements

Applicants must submit an Energy Statement showing how the development will meet the following policy requirements:

- Follow the hierarchy of energy efficiency, decentralised energy and renewable energy technologies set out in the London Plan (2016 Chapter 5 (particularly Policy 5.2) to secure a minimum 35% reduction in regulated CO2 emissions below the maximum threshold allowed under Part L 2013.

The energy hierarchy has been followed as shown in the submitted Energy Statement and savings have been maximised as far as practically possible. This is in line with Camden's policy as set out in the table below for major non-domestic refurbishments.

Table 2b Energy reduction targets, non-domestic

Development should comply with these standards/provide this information	Non-domestic New Build (assessed under L2A)			Non-domestic Refurbishment (assessed under L2B)		
	Major (>1,000 sqm)	Medium (500sq.m and <1,000 sqm)	Minor (<500sq.m)	Major (>1,000 sqm)	Medium (500sq.m and <1,000 sqm)	Minor (<500sq.m)
<b>Energy and carbon reduction targets</b>						
Overall carbon reduction targets	35% below Part L of 2013 Building Regulations (London Plan 5.2, Local Plan CC1)	Greatest possible reduction below Part L of 2013 Building Regulations (Local Plan CC1)	Greatest possible reduction below Part L of 2013 Building Regulations (Local Plan CC1)	Greatest possible reduction, meeting Part L2B for retained thermal elements. (London Plan 5.4, Local Plan CC1)	Greatest possible reduction below Part L of 2013 Building Regulations (Local Plan CC1)	Greatest possible reduction below Part L of 2013 Building Regulations (Local Plan CC1)
Reduction in CO2 from onsite renewables (after all other energy efficiency measures have been incorporated)	20% (London Plan 5.7, Local Plan CC1)	20% (London Plan 5.7, Local Plan CC1)	Incorporate renewables where feasible	20% (London Plan 5.4, 5.7, Local Plan CC1)	20% (London Plan 5.4, 5.7, Local Plan CC1)	Incorporate renewables where feasible

The following Camden policy extract also notes that energy reduction calculation should be based on the Building Control approach. Building Control have advised that Part L2B applies for the scheme at Finchley Road. This is also supported by Camden’s Energy Efficiency and Adaptation Document published in 2019 (<https://www.camden.gov.uk/documents/20142/4823269/Energy+Efficiency+and+Adaptation+CPG+-+March+2019.pdf/6732a28c-2c90-7101-c11e-3372e29e032d>).

**Energy statements for refurbishments**

- 6.8 Refurbishments and changes of use should be presented separately to new build elements within the energy statement, to establish the baselines, measures and approaches taken for the different parts of the developments, and how they meet and exceed the respective Part L Building Regulations (including consequential improvements).
- 6.9 However, the overall energy reduction target will depend on the building control approach and therefore whether any new build parts within the development are large enough (according to the definitions outlined within the Building Regulations) to be considered a “new building” and should therefore be assessed separately, or whether it should be considered as part of the refurbishment. **Appendix 2.0** provides some examples of mixed new build and refurbishment schemes, and the suggested approach to take.
- 6.10 The energy assessment should state both the existing building baseline and Part L compliant baseline. Improvements against these baselines at each stage of the energy hierarchy should be outlined in the energy assessment.  
 Within the Energy Statement, the applicant should fully outline the scope of works and if any parts of an existing scheme will not be required to undergo improvements under planning or building regulations. The Council will encourage all schemes to go as far as possible to deliver the greatest carbon savings, taking account of the scope of works.

On the basis of the above, all the GLA related policies for new-build major developments and deep refurbishments are not applicable for the scheme at 551-557 Finchley Road.

- The new London Plan targets will be introduced in Camden in 2020, such as Zero Carbon requirement for non-residential developments and the minimum ‘Be Lean’ stage improvement.

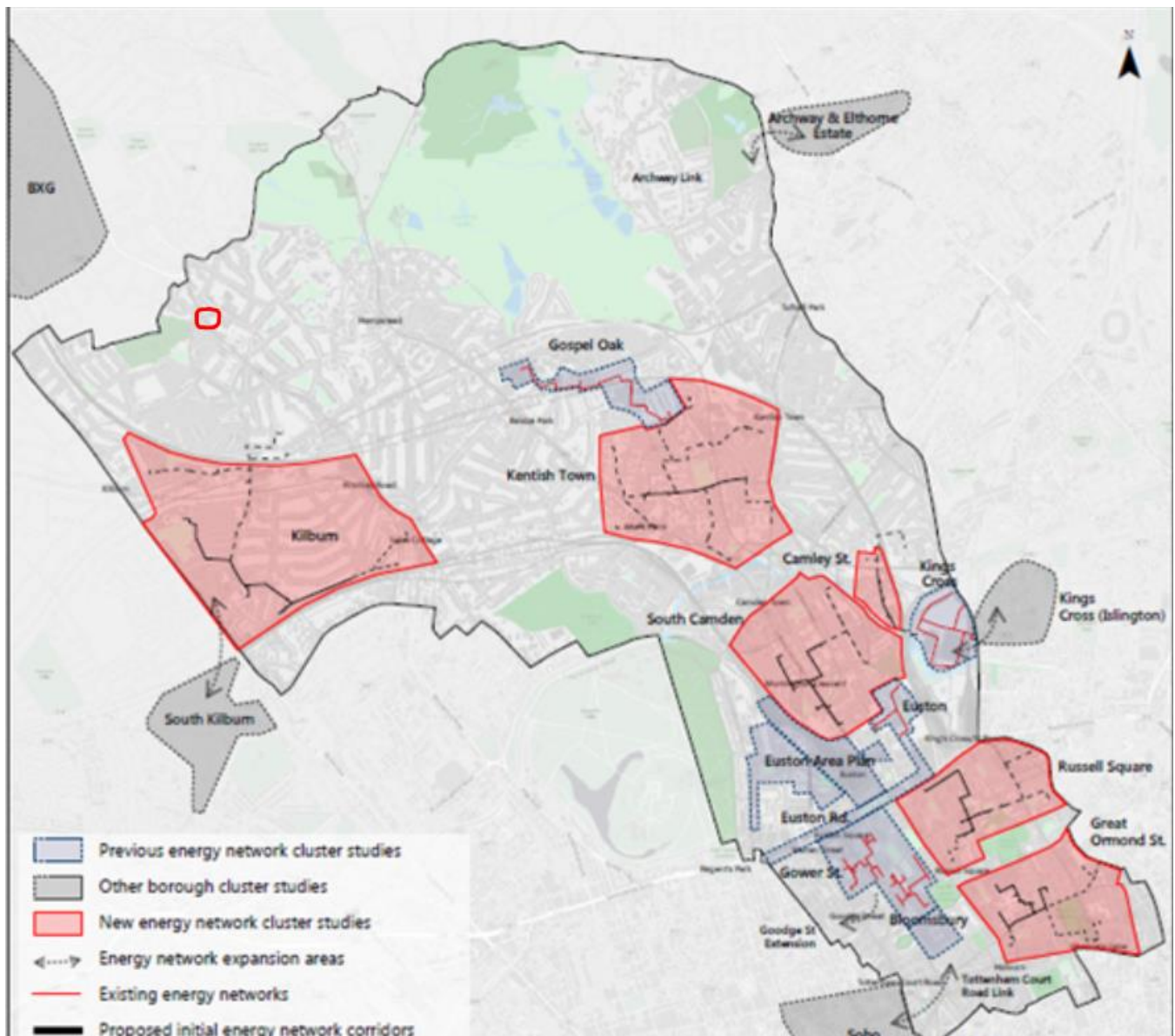
As stipulated by GLA’s Guidance on Preparing Energy Assessments (both 2018 and 2020 versions), the Zero Carbon requirement and minimum ‘Be Lean’ stage improvements apply only to major new-build development and are not applicable for refurbishment schemes such as 551-557 Finchley Road. It would be highly onerous to expect zero carbon for a refurbishment scheme as this would not be technically or financially feasible.

- Non-domestic developments should therefore achieve at least a 15 per cent improvement on Building Regulations from energy efficiency.

This requirement is shown to be met (in comparison with the existing building baseline) in the submitted Energy Statement. This methodology is in line with Para 7.3 of the GLA Guidance on Preparing Energy Assessments (October 2018 version, relevant to the Energy Assessment submitted in November 2019) whereby an existing building baseline in the un-refurbished state is deemed suitable for refurbishment developments, rather than baseline parameters in line with Building Regulations.

- GLA guidance on preparing energy assessments and CPG 'Energy Efficiency and Adaptation' (here) should be followed. The London Plan (Policy 5.5) requires developers to prioritise connection to existing or planned decentralised energy networks where feasible. Camden's Local Plan Policy CC1) requires all major developments to assess the feasibility of connecting to an existing decentralised energy network, or where this is not possible establishing a new network. NOTE: Decentralised Energy Priority Areas are shown on this map].

The feasibility of connecting to a network has been assessed in the submitted Energy Statement. The image below also shows in a red circle the site location on the map referred to in the comment above where it is shown that there is no opportunity for DEN connection. In any case, the proposed development plantroom could be amended in the future to install heat exchangers as opposed to a gas boiler so as to draw heat from a heat network, if one becomes available in the future.



- Camden’s Local Plan (chapter 8) promotes zero carbon development and requires all development to reduce carbon dioxide emissions through following the steps in the energy hierarchy. It also requires all developments to achieve a 20% reduction in CO2 emissions through renewable technologies (the 3rd stage of the energy hierarchy) wherever feasible, and this should be demonstrated through the energy statement.

As noted in the submitted Energy Statement, the development has gone as far as practically possible to reduce carbon emissions on site. ASHP have been proposed to cover some of the site’s heating demand. Installation of further ASHP is not feasible as these units need to be located externally and guest-rooms would have to be lost to accommodate more plant space. Installation of PV would significantly alter the appearance of the façade which needs to be preserved. It should also be noted that use of more ASHP would significantly increase the electrical loads of the site and would lead to a requirement for a substation. This would be a significant additional cost and it would not be technically feasible to accommodate a new substation within the layouts of a refurbishment scheme. ASHP also require acoustic attenuation – and the addition of more ASHP external units will have a detrimental impact to neighbouring sensitive noise receptors.

Going for a completely gas-free development would require a much larger air source heat pump plant area, a substation and more noise will be generated by the larger ASHP system. The currently proposed energy strategy is the most space and cost efficient. We proposed this strategy based on:

- limited plant space available, particularly for the ASHPs as well as PVs;
- Façade level PV not applied due to the need to retain the existing façade characteristics;
- the ASHP plantroom affects the roof shape and reduces guestroom areas, so this has been kept to a minimum serving only the communal areas which require cooling via ASHPs;
- we were tackling the project as refurbishment as opposed to major new development.

For the above reasons, increasing renewable technologies for this site and refurbishment scheme or meeting zero carbon would not be technically or financially feasible.

- Where the London Plan carbon reduction target cannot be met on-site, we may accept the provision of measures elsewhere in the borough or a financial contribution (charged at £95/tonne CO<sub>2</sub>/ yr over a 30 year period), which will be used to secure the delivery of carbon reduction measures elsewhere in the borough. Further information on this can be found here.

Zero Carbon is not applicable for a refurbishment scheme based on the GLA guidance. The scheme is not a significant 'deep refurbishment' that would trigger the requirement for assessment under Part L2A.

#### Comments

Heat pumps and PV were considered for the entire building and rejected for reasons of roof space and visual impact (no pre-app advice or similar justification is provided)

[Please see technical considerations and constraints above to providing more ASHP or PVs for this site.](#)

Central gas boilers proposed for domestic hot water throughout, and space-heating of guest rooms

[Yes, this is correct. It is the only feasible solution for a refurbishment scheme with limited plant space to incorporate more ASHP and substation.](#)

Air source HPs proposed for heating/cooling of non-guest room areas.

[Yes, this is correct and it was deemed the most technically viable solution for these areas.](#)

Part L modelling has assumed L2B (non-residential refurbishment) baseline – as a so-called 'deep refurbishment' we would expect L2A to apply

[Please see clarifications above.](#)

Be Lean CO<sub>2</sub> reduction is 19.8%, meeting/exceeding the minimum 10% - however note L2B baseline.

[Please see clarifications above.](#)

Proposed Be Green reduction is only 1.3% and overall CO<sub>2</sub> reduction is 26.1%. The scheme is therefore not policy-compliant (20% and 35% targets respectively) even when using a L2A baseline (see above).

[Please see clarifications above.](#)

The supporting BRUKL documents supporting each stage (Baseline, Be Lean and Be Green) are not provided.

[BRUKL documents appended as part of this letter.](#)

## SUSTAINABILITY

Camden have made the following comments:

Policy requirements Applicants are expected to submit a Sustainability Statement - the detail of which to be commensurate with the scale of the development showing how the development will:

Implement the sustainable design principles as noted in policy CC2

Achieve a BREEAM 'Excellent' rating and minimum credit requirements under Energy (60%), Materials (40%) and Water (60%) as set out in CPG 'Energy Efficiency and Adaptation' (here).

Comments

A BREEAM Refurbishment and Fit Out 2014 Pre-Assessment was conducted, applying the hotel use class.

The overall score was 71.8% Although it meets Excellent this is considered to be a small margin which if targeted may lead to disappointment and non-compliance at BREEAM certification stage (needed for the s106 pre-implementation and post construction clause discharges). We would expect schemes to target a rather greater buffer above the minimum at planning stage, eg 75% as a working figure.

Section credits achieved:

Energy – 57.7%, does not meet minimum 60%

Water – 62.5%, meets minimum 60%

Materials – 69.2%, meets minimum 40%

In addition, we would want to see more detail and quantification of targets around materials, responsible sourcing, water efficiency and green infrastructure.

The pre-assessment provides an overview of the potentially BREEAM rating achievable at Detailed Design Stage. Further assessment and engagement with the design team (part of it has not been appointed at Planning Stage) will enable confirmation of additional credits post planning, to meet the BREEAM target rating of Excellent set out in planning policy and relevant planning conditions. To achieve a 60% of energy targets, an additional 1 no. credit under Ene06 Energy Efficiency Transportation could be targeted, resulting in an overall of 61.5% for the Energy category.

## AIR QUALITY

Camden have made the following comments:

**Issue 1.** Given the location, we believe the site concentrations are likely to be higher in reality than modelled. The study has used the grid square Defra mapping data for background concentrations. We would expect the most recent, most local verified background AMS data (most probably Bloomsbury) to be compared with Defra figure, and use the higher of the two for precautionary reasons.

The assessment has been updated to use more conservative background concentrations. The closest background automatic monitoring site is Haringey Priory Park South, however the concentrations measured at this location are considered likely to lower than the background concentrations at the site. The highest measured concentration measured between 2014 and 2018 at the nearest background monitoring location (Frognaal Way diffusion tube) of 32.3 ug/m3 has been used in the updated assessment. This is considerably higher than the mapped concentration and is considered conservative in terms of future (2021) concentrations. The verification, using Swiss Cottage monitoring data, has used concentrations measured at Bloomsbury. The PM10 and PM2.5 concentrations used in the assessment are the highest of the mapped and measured concentrations.

Please see attached our amended report considering this.

**Issue 2.** In addition, the study has focused on the short term limit as a non-residential scheme. However as a hotel proposal, we note the possibility of longer term stays (>12 months), meaning the long term limit (exceeded across this site) should also be considered as relevant to the guest rooms. We also refer you to the Council's adoption in 2019 of the even lower WHO exposure limits as a material reference point, albeit not yet in planning policy.

Given the development is an apart-hotel, long term stays over 12 months is deemed unlikely. The revised modelling till predicts concentrations that are well below the 60 ug/m3 threshold for a potential exceedance of the short-term objective. The proposed development comprises the refurbishment of an existing building, with a small extension to the rear.

It should be noted that it may not be feasible for a refurbishment scheme of this nature to provide mechanical ventilation supply to all guest rooms. The reason for this is the non-standard layouts of the rooms, the lack of plant space and riser space if a centralised mechanical ventilation system was to be provided and the need for façade penetrations if a local / room level MVHR was to be provided in each guest-room. In addition, the floor to ceiling height is also quite restrictive to enable the scheme to incorporate mechanical ventilation as it is a refurbishment, rather than a new-build where there is more flexibility on what systems could be designed and installed into a building.

**Impacts on local area & AQN**

The scheme is to be car free.

Proposed heating and hot water is from communal gas boilers (guest rooms), with other parts to be heated and cooled by means of air source heat pumps.

**Issue 3** In this location on a very busy road, a site expected to exceed long term CO2 limit and possibly the short term limit (see issue 1), with residential properties in the area, and given the objectives of Camden’s Cleaner Air Action Plan we would only find a zero emissions proposal to be acceptable.

An AQ Neutral assessment finds the transport emissions to be neutral vs benchmarks. However on building emissions it is non-compliant:

Due to the relatively high hot water demand of the hotel, the building-related NOx emission is 18.6 kg/annum above the building emission benchmark for the proposed development.

**Issue 3** In this regard, the scheme receives a straight objection, on London and Camden air quality policy grounds. As per LP policy and relevant guidance, both transport and building emissions must individually pass their benchmark tests.

We have carried out more detailed analysis of the likely operation hours of the boiler at peak capacity and following this analysis we have amended our report. The results show that the development is AQ Neutral for Building related emissions too.

**Construction dust risks**

The scheme is assessed as Medium Risk:

Table 8: Risk of Dust Impacts Prior to Mitigation

Dust Source	Emission Magnitude	Human Health Risk	Dust Soiling Risk	Overall Risk
Demolition	Small	Negligible	Medium	Medium
Earthworks	Small	Negligible	Low	Low
Construction	Small	Negligible	Low	Low
Trackout	Small	Negligible	Low	Low

**Issue 4** Based on the commentary within the risk assessment, there is reason to believe that the component and hence overall risk levels may be higher.

As one example, dust emissions magnitudes are deemed ‘Small’ for each of the 4 stages of construction, despite not all the criteria for small magnitude being met. Many factors are either uncertain (eg “it is unlikely that...”) or are

not committed to / it is implied that worse-case factor may actually apply (eg “while it cannot be guaranteed that...”) ; this should actually trigger inclusion in higher categories.

Hence we have no confidence that the most optimistic assumptions will be realised or that these will result in only ‘Small’ dust magnitudes. A precautionary approach has not been assumed, rather an optimistic one, without justification.

The same could possibly also apply to various other elements of the risk assessment. Overall, as it stands it does not definitely demonstrate that this is not for example a High Risk scheme.

We have amended the Air Quality report to address this. The construction dust assessment has been updated with more detail and justification for the ‘small’ dust emission magnitudes. The proposed development primarily comprises internal modifications to an existing building. A single story rear extension will be demolished and replaced, however the scale of the works are very minor. There is no vehicular access to the rear of the site, therefore there will be no heavy earth moving equipment used and little opportunity for trackout of material. The GLA Construction Dust Guidance provides a framework for the assessment of dust risk, however paragraph 4.24 acknowledges the need for professional judgement. Having undertaken construction dust risk assessments for many developments in London, it is our professional judgement that due to the very minor scale of the proposed works, a ‘small’ dust emission magnitude is justified.

## CONCLUSION

I hope the above provides sufficient clarification to the points raised in the emails on 16 April 2020 but if you have any additional comments or questions, please do not hesitate to contact us.

Kind regards,

**KOSTAS MASTRONIKOLAOU**  
ASSOCIATE



**APPENDIX**