

## **Former Stag Brewery, Lower Richmond Road, Mortlake, London**

### **Responses to Consultee Comments - Merged**

*In relation to Planning Application refs: 22/0900/OUT (Application A) and 22/0902/FUL (Application B).*

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*\*Please note that the page numbers refer to the merged document pages (this document), not the page numbers shown on each document themselves*

## **2. Cover Letter**

Prepared by Gerald Eve LLP

Dated 14 September 2022

(pages 3 – 13)



**GERALDEVE**

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14 September 2022

**FAO: Lucy Thatcher**

**Our ref: NTH/AKG/SOTH/J7699**

**Your ref: 22/0900/OUT and 22/0902/FUL**

Dear Lucy

**Former Stag Brewery, Lower Richmond Road, Mortlake, London**  
**Substitutions to Planning Application refs: 22/0900/OUT (Application A) and 22/0902/FUL (Application B)**

On behalf of our client, Reselton Properties Limited, we write to respond to matters raised in statutory consultation responses in respect of the pending planning applications refs: 22/0900/OUT ('Application A') and 22/0902/FUL ('Application B') at the Former Stag Brewery, Lower Richmond Road, Mortlake, London ('the Site').

The statutory consultation responses are provided in the following documents:

*Applications A and B*

1. LBRuT Internal Consultees, dated 27 May 2022;
2. Accelar – Energy and Sustainability comments on behalf of LBRuT, received May 2022; and
3. Greater London Authority ('GLA') Stage 1 Report, dated 20 June 2022 (ref: GLA/2022/0288/S1/01).

*Application A only*

1. Health and Safety Executive, dated 27 May 2022 (ref: pgo-1164).

The responses comprise matters which have resulted in amendments to the application which are supported by updated plans and documents for formal substitution. These are attached at Appendices 5 and 6.

In addition, this pack contains response tables at Appendices 2, 3 and 4 where matters raised by statutory consultees simply requires clarification.

**Background**

Two applications for planning permission were submitted to the London Borough of Richmond upon Thames ('LBRuT') on 11 March 2022 for the masterplan redevelopment of the Site and are currently pending determination. Consultation with statutory and public consultees has been ongoing throughout this period.

## Matters for Substitution

The documents submitted for substitution represent amendments which are considered appropriate to respond to comments raised by statutory consultees during the consultation period of the two pending planning applications.

In summary the proposed changes to the scheme relate to Application A only and comprise:

- i. Cinema height reduced and top floor set back;
- ii. Design alterations to cinema and office entrances at Building 1;
- iii. Building 10 reduced by a storey and associated loss of 9 intermediate residential units;
- iv. Total reduction of 14 units (9 in Building 10 and 5 in Development Area 2);
- v. Loss of 79 sqm GIA of office floorspace;
- vi. Total loss of 55 sqm of flexible use floorspace and loss of 90sqm of flexible use space in the High Street Zone;
- vii. Lighting strategy amended;
- viii. Revised drainage strategy;
- ix. Amended fire strategy;
- x. Amended refuse strategy;
- xi. Landscaping updates; and
- xii. Updated wheelchair accessible unit layouts.

A schedule of the physical changes made to Application A is set out in paragraph 1.3 of the Design and Access (DAS) Statement Addendum, prepared by Squire & Partners and page 3 of the Environmental Statement (ES) Statement of Conformity, prepared by Waterman IE.

Certain elements of both Applications A and B have also been re-assessed against updated guidance published following the submission date of the applications (11 March 2022). Hoare Lea have reviewed the Whole Life Carbon Assessment and the Circular Economy Statement in light of the updated GLA draft guidance. In addition, although not a matter raised by LBRuT, the BRE Guidelines were updated in June 2022. EB7 have reviewed the scheme and have provided a supplementary Internal Daylight and Sunlight Report, dated 28 July 2022, for completeness. The assessment does not alter the conclusions set out in paragraph 18.56 of the Town Planning Statement, dated March 2022.

## Substitution Documents

The documents submitted for formal substitution or as addendum documents to those previously submitted in March 2022 are:

### Application A (ref. 22/0900/OUT)

- a) Updated Unit Mix Accommodation Schedule (Rev J), prepared by Squire & Partners (to replace Unit Mix Accommodation Schedule that was submitted March 2022);
- b) Updated Community Infrastructure Levy ('CIL') form, prepared by Gerald Eve LLP (to replace CIL form that was submitted March 2022);
- c) Updated Drawing Schedule, prepared by Squire & Partners (to replace Drawing Schedule that was submitted March 2022);
- d) Updated Housing Standards Compliance Schedule, prepared by Squire & Partners (to replace Housing Standards Compliance Schedule submitted March 2022);
- e) Revised Proposed Plans, Sections and Elevations, prepared by Squire & Partners (to replace those relevant drawings submitted in March 2022);

- f) Playspace Plan (ref: P10736-00-003-GIL-0800), prepared by Gillespies LLP;
- g) Updated Design Code, prepared by Squire & Partners (to replace the Design Code submitted in March 2022);
- h) Revised High Street Zone Plan and a bubbled version for ease of review, prepared by Squire & Partners (to replace that previously submitted under Appendix A of the Town Planning Statement in March 2022);
- i) Additional Lighting Layout Plans, prepared by Michael Grubb Studio (to be read in conjunction with the Lighting Strategy submitted in March 2022);
- j) Updated Waterfront Lighting Assessment, prepared by Michael Grubb Studio (to replace that submitted after March 2022 submission);
- k) Design and Access Statement Addendum, prepared by Squire & Partners, dated July 2022 (to be read alongside the March 2022 submitted Design and Access Statement);
- l) Retail and Leisure Statement Addendum, prepared by RPS, dated July 2022 (to be read alongside the March 2022 submitted Retail and Leisure Statement);
- m) 'Impact of reduction in basement on scheme viability' note, prepared by BNP Paribas Real Estate (to be read independently from submitted pack in March 2022);
- n) New Boathouse Email, prepared by Dartmouth Capital (to be read independently from submitted pack in March 2022);
- o) Additional Update of Rail Impact Assessment for Mortlake Station, prepared by Stantec (to be read independently from submitted pack in March 2022);
- aa) Community and Cultural Facilities Assessment Addendum, prepared by Hatch (to be read in conjunction with that submitted in March 2022);
- bb) Employment Assessment Addendum, prepared by Hatch (to be read in conjunction with that submitted in March 2022).

Application B (ref: 22/0902/FUL)

- a) New School Overheating Analysis, prepared by Hoare Lea (to be read independently from submitted pack in March 2022); and
- b) New 'Indicative Green Wall Location' elevations of the school (ref: C645\_Z3\_E\_AL\_002), prepared by Squire & Partners (to be read independently from submitted pack in March 2022).

Both Application A and B

- a) Updated Application Forms for both Application's A and B, prepared by Gerald Eve LLP (to replace Application Form's that were submitted March 2022);
- b) New CAVAT Value Note, prepared by Waterman IE (to be read independently from submitted pack in March 2022);
- c) Updated Fire Statement, prepared by Hoare Lea (to replace Fire Statement submitted in March 2022);
- d) Updated Gateway 1 form, prepared by Hoare Lea (to replace Gateway 1 form submitted in March 2022);
- e) Additional Internal Daylight and Sunlight Statement, prepared by EB7 (to be read in conjunction with the Internal Daylight and Sunlight submitted in March 2022);
- f) Updated Floor Area Schedule's (GIA, NSA, and GEA (Rev J)), prepared by Squire & Partners (to replace the Floor Area Schedule's (Rev I) that were submitted in March 2022);
- g) Updated Facts and Figures Appendix D from the Town Planning Statement, prepared by Gerald Eve LLP (to replace Appendix D Facts and Figures Appendix in Planning Statement submitted in March 2022);
- h) Updated Drainage Strategy, including SUDS proforma, and Appendices A- K, prepared by Waterman IE (to replace submitted Drainage Strategy in March 2022);

- i) Updated Highways Plans, prepared by Stantec (to replace relevant Highway Plans submitted in March 2022);
- j) Supplementary Protected Species Report, prepared by Waterman IE, dated September 2022 (to be read in conjunction with the Environmental Statement submitted in March 2022);
- k) Updated Landscape Drawings, prepared by Gillespies (to replace the relevant Landscape Drawings submitted in March 2022);
- l) Updated Landscape Drawing Schedule, prepared by Gillespies (to replace submitted Landscape Drawing Schedule submitted in March 2022);
- m) Updated Operational Waste Management Plan, prepared by Stantec (to replace Operational Waste Management Plan submitted March 2022);
- n) Updated Whole Life Carbon, prepared by Hoare Lea (to replace Whole Life Carbon submitted in March 2022);
- o) Updated Circular Economy Statement, prepared by Hoare Lea (to replace the Circular Economy Statement submitted in March 2022);
- p) Updated Appendix F- BRUKL Be Green calculations, prepared by Waterman IE (to replace the Appendix F- BRUKL Be Green calculations submitted in March 2022);
- q) Updated Appendix F- BRUKL Be Lean calculations, prepared by Waterman IE (to replace the Appendix F- BRUKL Be Lean calculations submitted in March 2022);
- r) Updated Appendix F- SAP Be Green calculations, prepared by Waterman IE (to replace the Appendix F- SAP Be Green calculations submitted in March 2022);
- s) Updated Appendix F- SAP Be Lean calculations, prepared by Waterman IE (to replace the Appendix F- SAP Be Lean calculations submitted in March 2022);
- t) GLA Carbon Emissions Supporting Sheet, prepared by Hoare Lea (to replace the GLA Carbon Emissions Supporting Sheet submitted in March 2022);
- u) Revised Arboricultural Impact Assessment, prepared by Waterman IE (to replace that submitted in March 2022);
- v) New Environmental Statement Letter of Conformity with the below Annex's, prepared by Waterman IE (to be read in conjunction with the Environmental Statement submitted in March 2022);
  - a. Annex 1: Review of the Amendments in relation to the Environmental Impact Assessment;
  - b. Annex 2: Air Quality Assessment;
  - c. Annex 3: Updated AVRs;
  - d. Annex 4: Updated Illustrative Masterplan Ground Floor Level;
- w) New Appendix 12.5, Revised River Wall Note, prepared by Waterman IE (to be read in conjunction with the pack submitted in March 2022);
- x) Health Impact Assessment Statement of Conformity, prepared by Hatch (to be read in conjunction with the Health Impact Assessment submitted in March 2022);
- y) Landscape Design and Access Statement Addendum, prepared by Gillespies LLP (to be read in conjunction with the Landscape Design and Access Statement submitted in March 2022);
- z) Financial Viability Assessment Addendum, prepared by BNP Paribas Real Estate (to be read in conjunction with the submitted Financial Viability Assessment in March 2022) [to follow];
- aa) Replacement Sustainable Construction Checklist, prepared by Hoare Lea (to replace that submitted in March 2022 submission);
- bb) Transport Assessment Addendum, prepared by Stantec (to be read in conjunction with the Transport Assessment submitted in March 2022);
- cc) New Assessment of Rail Impacts, prepared by Stantec (to be read in conjunction with the Transport Assessment submitted in March 2022);
- dd) New Assessment of Bus Stops, prepared by Stantec (to be read in conjunction with the Transport Assessment submitted in March 2022);
- ee) New Bespoke PTAL Technical Note, prepared by Stantec (to be read in conjunction with the Transport Assessment submitted in March 2022);

- ff) New Traffic Data Comparison, prepared by Stantec (to be read in conjunction with the Transport Assessment submitted in March 2022);
- p) Interim QDR Report, prepared by Hoare Lea (to be read in conjunction with Fire Statement and Gateway 1 report submitted in March 2022);
- q) Basement Screening Assessment, prepared by Waterman IE (new document);
- r) Updated Ecology ES Chapter and figures (13.1-13.10) and associated Statement of Conformity, all prepared by Waterman IE, dated September 2022 (to replace that submitted in March 2022 submission); and
- gg) This Covering Letter, prepared by Gerald Eve LLP.

### **Consultee Response Trackers (including matters for clarification)**

The following trackers have been prepared to summarise the issues raised by statutory consultees, identify how these have been responded to and direct the review to the relevant documents. The trackers have been merged into a single document for submission.

#### Application A only:

- Responses to the HSE Substantive Response for Stag Brewery, prepared by Hoare Lea (Appendix 2(11) and Appendix 3(P));
- Design Code Comments Tracker, prepared by Squire & Partners (Appendix 2(9) and Appendix 3D); and
- Townscape Briefing Note, prepared by Montagu Evans, dated 9 August 2022 (Appendix 2(13), 3B and Appendix 4B).

#### Application A and B:

- Accelar energy response tables, prepared by Hoare Lea (Appendix 2(5), 2(6), 6a and 6b);
- Combined LBRuT and HSE response tracker (Appendix 2(3) and 3);
- GLA Stage 1 Response tracker (Appendix 2(4) and 4); and
- Noise Conditions Response Note, prepared by Waterman IE (Appendix 2(12) and 3(I));
- Drainage Response note, prepared by Waterman IE (Appendix 2(10) and 3(N)).

### **General Summary of Response**

In terms of planning matters to consider as a result of the amendments made following the consultation exercise, the key areas of review are:

1. Land use;
2. Design and Landscape;
3. Fire Safety;
4. Refuse Strategy;
5. Transport;
6. Energy and Sustainability;
7. Environmental Statement Matters;
8. Townscape; and
9. Viability.

1. Land Use

#### *Non-residential land uses*



Table 1 summarises the key changes to the land use areas. Areas not quoted in the table remain as per the March 2022 submission and no changes have been made to the maximum and minimum flexible use floorspace caps set out in Table 4 of the submitted Town Planning Statement. A revised full floor area schedule has been provided by Squire & Partners (dated 13 July 2022, Rev J):

Land Use	March 2022 Submission (GIA sqm)	July 2022 Substitutions (GIA sqm)	Change (+/-)
Flexible Uses	4,839	4,784	-55
Office (Class E)	4,547	4,468	-79

Table 1: Land Use area changes as a result of the July 2022 substitutions. Areas based on Squire & Partners area schedule, dated 13 July 2022 (Rev J).

The revised areas set out in Table 1 are considered to continue to meet the planning policy objectives of the site in terms of creating a new village heart for Mortlake and employment opportunities, in line with Local Plan Policies LP25 and the Site Allocation SA24.

RPS have reviewed their Retail and Leisure Statement (RLS) and provided an addendum. Paragraph 13 of the addendum confirms that the changes to flexible use floorspace now proposed and the reduced number of residential units are negligible and would not cause any significant adverse effects upon any town centre. Furthermore, there would be no issue in terms of the sequential test given the appropriateness of the scale of the proposed flexible use floorspace. Paragraph 14 of the Addendum goes on to confirm that the conclusions reached in Section 7 and 8 of the submitted RLS remain robust.

Hatch have reviewed the proposed reduction in floor areas and have concluded in the following documents that the changes are minor and do not change the conclusions presented in the March 2022 submissions: i) Employment Assessment and ii) Cultural and Community Facilities Assessment. Therefore, the findings presented in March 2022 remain valid and robust.

As a result, the assessment put forward in Section 10 of the submitted Town Planning Statement, prepared by Gerald Eve LLP, dated March 2022 remains robust and valid.

#### Residential use

In terms of residential unit numbers and tenure mix, Table 2 sets out the changes made:

March 2022 Submission						July 2022 Substitutions							
Housing Tenure						Housing Tenure							
Unit Size	Potential London Affordable Rent		Potential London Shared Ownership		Private Market		Unit Size	Potential London Affordable Rent		Potential London Shared Ownership		Private Market	
Studio	0	0	0	0	48	6%	Studio	0	0	0	0	45	5%
1 bed	12	7%	27	56%	243	28%	1 bed	12	7%	22	56%	241	28%
2 bed	63	38%	21	44%	396	45%	2 bed	63	38%	17	44%	396	46%
3 bed	84	51%	0	0	165	19%	3 bed	84	51%	0	0	165	19%
4 bed	6	4%	0	0	20	2%	4 bed	6	4%	0	0	20	2%
<b>Total</b>	<b>165</b>		<b>48</b>		<b>872</b>		<b>Total</b>	<b>165</b>		<b>39</b>		<b>867</b>	

\*some % figures rounded up

*some % figures rounded up	
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Table 2: Summary of the originally proposed and the revised residential unit numbers and tenure mix

It is considered that this minimal reduction in residential units proposed would not alter the conclusions presented in Section 10 of the Town Planning Statement, prepared by Gerald Eve LLP, dated March 2022. The masterplan will continue to deliver a significant amount of new housing across the Site, in line with LBRuT and GLA policy aspirations. The residential provision within the Proposed Development would represent a significant provision of housing in the plan period (up to 1,071 out of 4,110 homes) for LBRuT in the next ten-year period. This equates to a contribution up to 26.06% (previously 26.4% in March 2022) of the LBRuT's target and would account for between two and three years of the annual delivery targets that the LBRuT have set for Barnes and Mortlake under Local Plan Policy LP 34.

The minimal reduction in residential units proposed is therefore considered acceptable.

## 2. Design and Landscape

Squire & Partners have provided an Addendum to the Design and Access Statement (DAS), dated July 2022 which addresses the design revisions made to the proposals. Gillespies LLP have also provided a Landscape DAS Addendum, dated July 2022, which addresses the areas of change resulting from the proposed modifications to the scheme.

The proposed modifications to the design of the Proposed Development do not change the conclusions reached in sections 12, 13 and 14 of the submitted Town Planning Statement, prepared by Gerald Eve LLP.

## 3. Fire Safety

In response to the HSE comments, dated 27 May 2022, Hoare Lea have led a thorough design review of the proposed scheme submitted under Application A.

Hoare Lea have prepared a HSE response table, dated 27 July 2022, which clearly sets out how each of the HSE's comments have been responded to. The key changes in respect of responding to HSE comments are:

- i. All refuse stores have been moved to ground floor level; and
- ii. Lift cores and stairwells direct to the basement have been removed/separated.

The Fire Statement and Gateway One form have also been updated to assess the revised design.

It is considered that the Updated Fire Strategy complies with London Plan Policy D12.

## 4. Refuse Strategy

The refuse strategy has been revised due to:

1. Responding to the HSE consultation comments; and
2. Reflecting the change in commercial floor areas and a reduction of 14 residential units.

As a result of consultation comments from the HSE all refuse storage at the basement level has been removed from Application A. Refuse can be accessed from the outside only.

Stantec have revised their Operational Waste Management Plan (OWMP) (Rev E, July 2022) accordingly and the revised OWMP has been submitted in support of these proposed scheme amendments.

## 5. Transport

In response to the detailed consultation comments received from LBRuT and TfL, Stantec have undertaken additional reviews and analyses of the proposed development.

The following technical notes have been prepared and submitted:

- TN045 - Assessment of Rail Impacts - Rev A
- TN046 - Assessment of bus stops - Rev A
- TN047 - Stag Brewery PTAL Technical Note - Rev A
- TN048 - Traffic Data Comparison
- TN049 - TA Addendum

## 6. Energy and Sustainability

In response to comments received from Accelar (the LBRuT's advisors) and to address updated draft GLA guidance, the following information has been reviewed and resubmitted by Hoare Lea:

- i. School overheating analysis;
- ii. GLA energy reporting tool;
- iii. BRUKL & SAP worksheet appendices.
- iv. Updated Circular Economy Statement; and
- v. Whole Life Carbon reporting sheet.

## 7. Environmental Statement Matters

The March 2022 ES has been reviewed considering the proposed amendments to the Development and an ES Statement of Conformity has been prepared by Waterman IE, dated 4 August 2022 and is submitted now in support of the amendments. Based on the review and following further assessment, Waterman IE have concluded that the findings of the Environmental Impact Assessment presented in the March 2022 ES in support of both the outline planning application (22/0900/OUT) and the detailed application for the school (22/0902/FUL) are unchanged when the proposed modifications to the scheme have been considered.

## 8. Townscape

Montagu Evans (ME) have reviewed the townscape comments received from LBRuT, considering the physical changes set out in the DAS Addendum and ES Statement of Conformity (see note dated 9 August 2022).

In terms of the assessment of London Plan Policy D9 within the submitted Town Planning Statement, it is considered that the assessment remains robust.

## 9. Viability

A number of the matters raised within the consultation responses have led to scheme changes which will affect the financial viability review of the scheme, such as increasing construction costs, the loss of residential units across the scheme and the inclusion of unanticipated s106 costs. These are being reviewed and will be factored into an updated Financial Viability Assessment for review and discussion with LBRuT officers and their advisors.

### Next Steps

We look forward to receiving confirmation of receipt of the substitution documents and the commencement of the re-consultation period. In the meantime, please contact Neil Henderson or Anna Gargan of this office should you have any questions.

Yours sincerely



### Gerald Eve LLP

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### Appendices:

Appendix No.	Name
1	Updated Facts and Figures Table, prepared by Gerald Eve LLP (to replace Appendix D Facts and Figures Appendix in Planning Statement submitted in March 2022).
2	Merged Consultation Response Tracker Document, including: <ol style="list-style-type: none"> <li>1. Contents Page</li> <li>2. This Cover Letter, prepared by Gerald Eve LLP;</li> <li>3. London Borough of Richmond upon Thames Response Tracker, prepared by the Applicant, dated 18th August 2022;</li> <li>4. GLA Stage 1 Response Tracker, prepared by the Applicant, dated 18th August 2022;</li> <li>5. Accelar Response Tracker for Application ref. 220900OUT, prepared by Hoare Lea, dated 12th August 2022;</li> <li>6. Accelar Response Tracker for Application ref. 220902FUL, prepared by Hoare Lea, dated 18th August 2022;</li> <li>7. Air Quality Response Tracker, prepared by Waterman IE, dated August 2022;</li> <li>8. Arboriculture Response Tracker, prepared by Waterman IE, dated 27th July 2022;</li> <li>9. Design Code Comments, prepared by Squire &amp; Partners, dated 29th August 2022;</li> <li>10. Flood Risk and Drainage Response Tracker, prepared by Waterman IE, dated August 2022;</li> <li>11. HSE Response Tracker, prepared by Hoare Lea, dated 14 September 2022;</li> <li>12. Response to Consultee Comments on Noise, prepared by Waterman IE, dated 29th July 2022;</li> <li>13. Townscape Response Tracker, prepared by Montagu Evans, dated 9th August 2022;</li> <li>14. Affordable Housing Responses, prepared by BNP Paribas, dated 22nd July 2022; and</li> <li>15. Impact of Reduction in Basement on Scheme Viability, prepared by BNP Paribas, dated 22nd July 2022.</li> </ol>
3	LBRuT Response Tracker, dated 18 August 2022, with associated Appendices as follows: <ol style="list-style-type: none"> <li>A. Excel Spreadsheet, prepared by BNP Paribas, dated 13 June 2022 (issued to LBRuT on 13 June 2022).</li> </ol>

	<ul style="list-style-type: none"> <li>B. Townscape Briefing Note, prepared by Montagu Evans, dated 9 August 2022.</li> <li>C. RHP Letter, dated 15 June 2022 (issued to LBRuT on 16 June 2022).</li> <li>D. 'Consultees Responses' note, prepared by BNP Paribas, dated 28 July 2022.</li> <li>E. 'Briefing Note – Response to Consultee Comments on Arboriculture' (ref: WIE18671-114-BN-3.3.2-Arboriculture Response), dated 27 July 2022.</li> <li>F. Air Quality Response Note, prepared by Waterman IE, dated June 2022 (issued to LBRuT on 29 June 2022).</li> <li>G. Annex 2: Air Quality Assessment Update of the ES Letter of Conformity, prepared by Waterman IE.</li> <li>H. Air Quality Responses, prepared by Waterman IE, dated August 2022.</li> <li>I. 'Briefing Note –Response to Consultee Comments on Noise', prepared by Waterman IE, dated 23 June 2022 (issued to LBRuT on 29 June 2022).</li> <li>J. Indicative school green wall elevation, prepared by Squire &amp; Partners, ref: C645_Z3_E_AL_002.</li> <li>K. TN045 - Assessment of Rail Impacts - Rev A, dated 27 June 2022, prepared by Stantec.</li> <li>L. TN047 - Stag Brewery PTAL Technical Note - Rev A, dated 1 July 2022, prepared by Stantec.</li> <li>M. TN048 - Traffic Data Comparison, dated July 2022, prepared by Stantec.</li> <li>N. Drainage Response Note, prepared by Waterman IE, dated August 2022.</li> <li>O. Email from Fulham Reach Boat Club, dated 17 June 2022.</li> <li>P. HSE Response Note, dated 27 July 2022, prepared by Hoare Lea.</li> </ul>
4	<p>GLA Stage 1 Response Tracker, dated 18 August 2022, with associated Appendices as follows:</p> <ul style="list-style-type: none"> <li>A. 'Impact of reduction in basement on scheme viability', prepared by BNP Paribas, dated 28 July 2022.</li> <li>B. Townscape Briefing Note, prepared by Montagu Evans, dated 9 August 2022.</li> <li>C. Concept design for Clifford Avenue crossing, prepared by Stantec, drawing ref: 38262-5520-29.</li> <li>D. 'Traffic Data Comparison' (TN048), prepared by Stantec.</li> <li>E. 'Assessment of Bus Stops' (TN046), prepared by Stantec.</li> </ul>
5	Design Code Comments tracker, prepared by Squire & Partners.
6	<p>Accelar Response Trackers</p> <ul style="list-style-type: none"> <li>a. Application A response tracker, prepared by Hoare Lea, dated 9 August 2022.</li> <li>b. Application B response tracker, prepared by Hoare Lea, dated 18 August 2022.</li> </ul>
7	Substitution Documents, as listed in this covering letter.
8	Substitution Drawings, as set out in the drawing schedules provided by Squire & Partners, Gillespies LLP and Michael Grubb Studio.

### **3. London Borough of Richmond upon Thames**

#### **Response Tracker**

Prepared by the Applicant

Dated 18<sup>th</sup> August

(pages 14 – 129)

## Former Stag Brewery

### London Borough of Richmond Upon Thames Consultation: Applicant Response

The table below sets out the Applicant's response to the comments received in respect of the applications for planning permission at the Former Stag Brewery site: Application A: for masterplan redevelopment (ref: 22/0900/OUT) and Application B: for a new secondary school (ref: 22/0900/OUT) on 27 May 2022 from the London Borough of Richmond upon Thames (LBRuT).

A list of Appendices to the responses provided in the table has been included at the end of this document.

### Application A (ref: 22/0900/OUT)

Row No.	LBRuT Comment (27 May 2022)	Applicant Response (18 August 2022)	Revised information submitted (Y/N)
<b>1. Policy</b>			
1	a. Heads of Terms <ul style="list-style-type: none"> <li>i. Employment and Skills Plan</li> <li>ii. Community Use Agreement, same as previously discussed.</li> <li>iii. The outline Heads of Terms included in the Planning Statement, albeit that the details will be subject to further discussion.</li> </ul>	Further discussions to take place.	
2	B. Conditions to secure: <ul style="list-style-type: none"> <li>A. Commercial and retail mix within the site.</li> <li>B. Retail within the High Street Zone</li> <li>C. Minimum cap for offices within the flexible floorspace (of 4,839sqm), at 2,000sqm.</li> </ul>	Agreed.  It should be noted that as a result of the design response required to the HSE's comments, the flexible use area has now decreased in size to 4,784 sqm (GIA). The floorspace 'caps' presented in the original submission (March 22) remain valid.	Y – updated High Street Zone Plan.  Y- Retail and Leisure Statement Addendum, prepared by RPS.

Row No.	LBRuT Comment (27 May 2022)	Applicant Response (18 August 2022)	Revised information submitted (Y/N)
3	C. Affordable housing i. First Homes need to be considered	See excel spreadsheet, dated 30 May 2022, prepared by BNP Paribas, was issued to LBRuT on 13 June 2022 (Appendix A).	Y – spreadsheet issued.
<b>2. Urban Design</b>			
4	<p><b>Masterplan</b></p> <p>a) It is felt that there is scope to adjust the Masterplan to respond to the main pedestrian route from the station.</p> <ul style="list-style-type: none"> <li>o Block 6 and the Green Link should be adjusted so that people coming from the station will view towards the Maltings. Adjusting block 6 would also have necessitated adjusting blocks 1, 2 &amp; 7 to make a meaningful improvement.</li> <li>o This would also have benefits for the cinema block which does not work as a 'block'.</li> </ul>	<p>Squires have provided the following response:</p> <p>At DRP2 it was shown that it is not possible to view the Maltings from the approach from the Station, even if Building 6 was altered. The cinema is a standalone building, justified in the DAS as such and is a building not a block. This arrangement has not changed since the original application which was considered acceptable to LBRuT.</p>	
5	b) The other area where the Masterplan could be better considered is block 10. The route from the basement car park is very contorted. A more meaningful route would have brought the exit to the car park into Bulls Alley where traffic lights could have been installed to deal with traffic emerging into Mortlake High Street.	Squires have provided the following response: “The access into Building 10 for the basement car park was carefully considered and requires a long building to be able to incorporate the ramp. This would not have been possible in Building 9 to give	



Row No.	LBRuT Comment (27 May 2022)	Applicant Response (18 August 2022)	Revised information submitted (Y/N)
		<p>access to Bulls Alley. Again this arrangement has not changed since the original application which was considered acceptable to LBRuT.”</p> <p>Stantec: The current arrangement is shown to work in terms of geometry and meet all visibility requirements.</p>	
6	<p><b>Height, Scale and Massing</b></p> <p>c) Building 10 looks unbalanced and somewhat over scaled. This would be less than substantial harm to the adjacent BTM and conservation area. It is recommended that Block 10 be a storey lower.</p>	<p>Squires have provided the following response: “There are not detailed reasons provided to lower Building 10 which we consider does not look out of scale in the illustrative views and which is acceptable in Waterman’s Townscape Assessment. However, we have lowered Building 10, so that it is as the previous application. This is beneficial to the relationship with the BTM adjacent.”</p> <p>See full details within the Design and Access Statement (DAS) Addendum, prepared by Squire &amp; Partners for further design details.</p>	Y – DAS Addendum and drawings

Row No.	LBRuT Comment (27 May 2022)	Applicant Response (18 August 2022)	Revised information submitted (Y/N)
7	<p><b>Building 1 - Cinema</b> d) The office entrance to the west elevation appears rather mean and not celebrated.</p>	<p>Squires have provided the following response:</p> <p>“The office entrance has been moved from the corner of Ship Lane to be more central to the facade of the office reception. This also provides a clear relationship between the cinema entrance on one side of the building and the office entrance now in a similar location on the opposite side of the building. The office entrance has also been marked out by the introduction of a small canopy, finished in bronze metal to match the rest of the building.”</p> <p>See section 2.5 of the DAS Addendum, prepared by Squire &amp; Partners for further design details.</p>	Y – DAS Addendum and drawings
	e) Elevations rather uninspiring and a floor higher than originally proposed.	<p>Squires have provided the following response:</p> <p>“It is a floor higher to accommodate the office accommodation above the</p>	Y – DAS Addendum and drawings

Row No.	LBRuT Comment (27 May 2022)	Applicant Response (18 August 2022)	Revised information submitted (Y/N)
		<p>cinema. It provides a simple form which can accommodate both uses and contrast with the other building types, as set out in the DAS and very similar to the original concept for the cinema design from the original application which was considered acceptable to LBRuT.”</p> <p>See section 2.5 of the DAS Addendum, prepared by Squire &amp; Partners for further design details.</p>	
	f) Recommend the roof treatment being lower in relation to the nearby BTM PHs	<p>Squires have provided the following response:</p> <p>“This was looked at carefully and the design altered to reduce the impact of the upper floor including lowering the height of the top floor. We have further lowered the overall height of the top floor and reduced it’s footprint by increasing the setbacks from the façade beneath. This further improves the</p>	Y – DAS Addendum and drawings

Row No.	LBRuT Comment (27 May 2022)	Applicant Response (18 August 2022)	Revised information submitted (Y/N)
		<p>relationship with the adjacent BTM.”</p> <p>See section 2.3 of the DAS Addendum, prepared by Squire &amp; Partners for further design details.</p>	
8	<p><b>Building 2, 3, 7, 8, 9, 10, 11, 12</b></p> <p>g) The proposed elevations to the Mansion Block typology generally feel very dominated by brick. Whilst a simple palette is supported some variation is recommended:</p> <ul style="list-style-type: none"> <li>• Consider different blends to give more subtlety of colour and texture.</li> <li>• Could the residential entrances be more celebrated?</li> </ul>	<p>Squires have provided the following response:</p> <p>“As set out in the DAS different brick blends are considered and will be part of the conditions submission. Also noted in the DAS is the highlighting of residential entrances with white GRC surrounds to give them more prominence and ‘more celebrated.’”</p> <p>See page 9 of the DAS Addendum, prepared by Squire &amp; Partners for further design details.</p>	Y – DAS Addendum and drawings
	h) Recommend the use of GRC for gables and celebrating entrances.	The use of GRC is noted in the DAS and illustrated as such, noting it will form part of a conditions submission	N

Row No.	LBRuT Comment (27 May 2022)	Applicant Response (18 August 2022)	Revised information submitted (Y/N)
9	<p><b>Building 6</b></p> <p>i) The entrances should be better celebrated.</p>	<p>The inclusion of GRC surrounds can also be the case for Building 6 entrances.</p> <p>See page 9 of the DAS Addendum, prepared by Squire &amp; Partners for further design details.</p>	Y– DAS Addendum and drawings
10	<p><b>Assessment of Views from DAS</b></p> <p>j) From Lower Richmond Road towards Cinema; from Mortlake Green; Looking west from Lower Richmond Road: The roof height of the cinema block looks somewhat dominant, if lowered this could aid the relationship to nearby BTM PHs.</p> <p>k) New High Street: the 'carriageway' section paving looks rather monotone 'carriageway' as shown, however other visualisations in the Landscape DAS have more variation. Please clarify</p> <p>l) Bottleworks Square: More softer elements are shown in the Landscape DAS.</p> <p>m) River view towards Riverside Square: the very tall lighting poles indicated too utilitarian (and tall). The appearance of the square looks low on seating provision.</p>	<p>Squires have provided the following comment:</p> <p>“As noted above the roof has been lowered. However this is an office floor that requires a minimum floor to ceiling height, so the reduction is as much as can be accommodated.”.</p> <p>The landscape DAS is more detailed and is correct. This has now been amended in CGI images in the DAS.</p> <p>The landscape DAS again is the proposed design, the views are more illustrative of activity.</p> <p>The tall lighting poles are to provide good lighting spread to make the space appealing and safe at night. More seating could be provided but equally</p>	

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		the square is seen as one of activity and being able to accommodate large crowds for viewing the boat race, where too much seating could pose a risk. These elements would be part of a condition. More planting has been added to the square edges.	
	n) From Sheen Lane: would be beneficial to have a muted/ recessive brick finish for the mansion block visible behind the hotel.	The final brick finish will be subject to condition but is noted.	
<b>11</b>	<b>Public Realm and Landscape</b> o) Provide additional seats to river frontage. p) Provide more greenery within Development Area 1 – this would aid the UGF	Can be dealt with via planning conditions.	
<b>12</b>	<b>Landscape Masterplan/DAS</b> q) Planting strategy: Incorporate softer elements within the hard paved areas- such as is shown in the visualisation for Bottling Square. r) Public art - it is appropriate for such a large scheme that a strategy is considered for this. No issues with proposals to be developed, which may include, in addition to heritage assets, art installations, 'Heritage Celebration', riverside art trail, retention of sections of river wall. s) Maltings Plaza: Concerns over the tall light columns, lack of seating and space at the rear of the Maltings looking rather dull. Recommend a softer approach. t) Towpath: Provide more background on which sections of the wall are retained or not.	Can be dealt with via planning conditions.	
<b>13</b>	<b>Lighting masterplan</b>	Can be dealt with via planning conditions.	

Row No.	LBRuT Comment (27 May 2022)	Applicant Response (18 August 2022)	Revised information submitted (Y/N)
	u) The lighting proposed for the maltings Plaza will need careful consideration as it looks a bit too much like sports facility floodlighting. More consideration needed there.		
14	Conditions / s106 obligations suggested	Please can these be provided.	
<b>3. Heritage</b>			
15	<p>The following harms have been identified:</p> <p>a) setting of the Maltings and the character and significance of this part of Mortlake CA33 as the skyline will change and the new buildings will appear more dominant behind the BTM</p> <p>b) The height of the proposed blocks, will result in some harm to the setting of the listed buildings and the BTMs within the CA on Thames Bank, and on the significance of CA33 when seen from viewpoints on the river, opposite bank and Chiswick Bridge.</p> <p>c) Boundary/perimeter walls to eastern section of site - There will be some harm caused by the removal of boundary walls and remains of buildings along Mortlake High Street, and therefore to the significance of this part of Mortlake</p>	<p>Setting of BTM and Listed Buildings addressed in the DAS and has improved with reduction in massing to Building 1 and 10.</p> <p>See separate Townscape Briefing Note, prepared by Montagu Evans, dated 9 August 2022. (Appendix B).</p> <p>Some of the boundary wall is kept at low level to the north and this has not changed since the original application which was considered acceptable to LBRuT.</p> <p>See separate Townscape Briefing Note, prepared by Montagu Evans, dated 9 August 2022 (Appendix B).</p> <p>See separate Montagu Evans Briefing Note, dated 9 August 2022 (Appendix B).</p>	

Row No.	LBRuT Comment (27 May 2022)	Applicant Response (18 August 2022)	Revised information submitted (Y/N)
	CA33 due to the loss of historic fabric which is of both historical and architectural interest.		
	d) Building 10 unbalanced and overscaled, impacting upon adjoining BTMs and conservation area.	Noted above and responded to in the DAS and Townscape Assessment.  See separate Montagu Evans Briefing Note, dated 9 August 2022. (Appendix B).	
16	<b>Recommended changes</b> <ul style="list-style-type: none"> <li>• Cinema – roof treatment lower</li> </ul>	See response provided to part d above.	
	<ul style="list-style-type: none"> <li>• Bottling plant – some of columns should be re-used in the new flexible interior space on the ground floor</li> </ul>	<p>As reported in the ES (paragraph 15.56), a number of the internal cast iron columns within the former Bottling Building would be retained as part of the Development and relocated across the ground, first and second floors of the building.</p> <p>Squires: Although we may agree to retain some of the existing columns these may not be able to be used and we have no data on their</p>	



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		structural integrity or capacity. We could look to use these in common parts of the building as non-structural elements, similar in principle to the reuse of the existing external brewery gates.	
<b>4. Affordable Housing</b>			
17	Affordable housing provision falls well short of the strategic 50% target - Further negotiation concerning scheme viability and the inputs that sit behind this is therefore required to seek the maximum affordable housing provision that can be viably provided on site.	See note prepared by BNP Paribas, dated 28 July 2022.	
18	The content and quantum of Affordable Housing i. Inconsistency between Planning Statement and FVA in terms of affordable housing	Documents are consistent.  For explanation on the drafting of the FVA, see note prepared by BNP Paribas, dated 28 July 2022.  In terms of the Town Planning Statement, paragraph 10.19 states: <i>The final level of affordable housing for the Scheme is the subject of ongoing viability discussions. However, for the purpose of assessing the scheme in terms of Environmental Impact, the scheme parameters have tested a</i>	

Row No.	LBRuT Comment (27 May 2022)	Applicant Response (18 August 2022)	Revised information submitted (Y/N)																								
	<p>Planning Statement</p> <ul style="list-style-type: none"> <li>1085 new homes in total</li> <li>20% affordable based on unit number</li> <li>213 affordable homes comprising 165 London Affordable Rent (LAR) and 48 intermediate homes.</li> <li>proposed unit and tenure mix;</li> </ul> <table border="1"> <thead> <tr> <th></th> <th>LAR</th> <th>Intermediate</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>1-bed</td> <td>12</td> <td>27</td> <td>39</td> </tr> <tr> <td>2-bed</td> <td>63</td> <td>21</td> <td>84</td> </tr> <tr> <td>3-bed</td> <td>84</td> <td>-</td> <td>84</td> </tr> <tr> <td>4-bed</td> <td>6</td> <td>-</td> <td>6</td> </tr> <tr> <td><b>Total</b></td> <td><b>165</b></td> <td><b>48</b></td> <td><b>213</b></td> </tr> </tbody> </table> <p>FVA</p> <ol style="list-style-type: none"> <li>1085 new homes in total</li> <li>15% affordable based on unit number</li> <li>167 affordable homes comprising various tenure mixes outlined for viability testing purposes.</li> </ol>		LAR	Intermediate	Total	1-bed	12	27	39	2-bed	63	21	84	3-bed	84	-	84	4-bed	6	-	6	<b>Total</b>	<b>165</b>	<b>48</b>	<b>213</b>	<p><i>maximum quantum of 22% affordable housing (by habitable room) based on an identified tenure split. This equates to up to 213 affordable units. The scheme is currently tested on the basis of 77% of units being provided as social rent and 23% as intermediate.</i></p>	
	LAR	Intermediate	Total																								
1-bed	12	27	39																								
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<b>Total</b>	<b>165</b>	<b>48</b>	<b>213</b>																								
	<p>ii. Require confirmation that RHP / RP have had the opportunity to comment in detail on the latest iteration of the proposals, not just for the purposes of financial viability testing, but also to ensure that they are comfortable with the revised layouts of the residential elements of the scheme to support the efficient management of the homes and to ensure that service charges are affordable to future residents.</p>	<p>See a letter from RHP, dated 15 June 2022, issued to LBRuT on 16 June 2022 (Appendix C).</p> <p>See also, note prepared by BNP Paribas, dated 28 July 2022 (Appendix D).</p>																									

Row No.	LBRuT Comment (27 May 2022)	Applicant Response (18 August 2022)	Revised information submitted (Y/N)
19	<p><b>b) Financial Viability</b></p> <p>i. The final content of the affordable housing to be delivered is dependent on ongoing discussions regarding viability</p>	Noted	
	<p>ii. The following are noted from a review of the submitted FVA;</p> <ul style="list-style-type: none"> <li>o Section 4.11 - states that the final sales will complete 12 months after completion. This seems unusual for a London location where sales to date have been extremely strong and many (particularly private) homes are sold off plan. Scrutiny of sales processes and the timing of income for the developer should be undertaken as this may have an impact on the on-going viability of the scheme (particularly with regard to potential Review Mechanisms).</li> <li>o Development phasing – further consideration should be given to the phasing of the scheme development and how it relates to wider scheme viability. As it currently stands the first phase development delivers a significant proportion of private homes, with only 48 intermediate homes being delivered. All of the affordable rented homes are being delivered in the later phase. The proposed phasing is not acceptable given the significant level of market housing proposed in the detailed Phase 1, the low level of affordable housing proposed in Phase 1 and the absence of any affordable rented housing in this Phase</li> </ul> <p>Further detail / justification is required to understand further the Phasing timescales for both the school application and Phases 1 and 2 and whether there is any overlap on when these phases commence on site and complete</p>	See note prepared by BNP Paribas, dated 28 July 2022 (Appendix D).	

Row No.	LBRuT Comment (27 May 2022)	Applicant Response (18 August 2022)	Revised information submitted (Y/N)
	iii. Should an agreement on scheme viability be reached the appropriate viability review clauses should be included within any s106; o Pre-commencement review to allow the consideration of whether the addition of Council grant funding could deliver an enhanced affordable housing offer.	See note prepared by BNP Paribas, dated 28 July 2022 (Appendix D).	
	o Pre-implementation – if development has not occurred within 24 months. o Mid Stage Review – Potentially at 80% completion of Phase 1 o Late-Stage Review – At the sale of 75% of the open market homes	See note prepared by BNP Paribas, dated 28 July 2022 (Appendix D).	
20	<b>c) Phasing</b> i. The timing of the affordable units must be secured in the S106 agreement, to ensure early completion of the affordable homes in Phase 2	See note prepared by BNP Paribas, dated 28 July 2022 (Appendix D).	
	ii. The following concerns are raised that need to be resolved prior to decision: o lack of clarity of when the affordable housing would be provided and the trigger for affordable housing provision being built and completed	See note prepared by BNP Paribas, dated 28 July 2022 (Appendix D).	
	o Currently 48 intermediate homes are to provided in Phase 1, with the remaining 165 general needs rented homes affordable homes to be completed in Phase 2. The significant back ending of the affordable housing delivery is a risk o Recommend: <ul style="list-style-type: none"> <li>▪ some rented homes within Phase 1 – Building 10?</li> <li>▪ early phasing of delivery of the affordable housing in Phase 2 is also secured</li> </ul>	See note prepared by BNP Paribas, dated 28 July 2022 (Appendix D).	

Row No.	LBRuT Comment (27 May 2022)	Applicant Response (18 August 2022)	Revised information submitted (Y/N)
	iii. The scheme must be subject to viability reviews in accordance with the Mayor's Affordable Housing and Viability SPD and the Council's Affordable Housing SPD in order to review the viability of providing affordable housing: <ul style="list-style-type: none"> <li>▪ prior to first start on site,</li> <li>▪ prior to start on site of the second phase on approval of a detailed scheme</li> <li>▪ final scheme review given the level of affordable housing</li> </ul>	See note prepared by BNP Paribas, dated 28 July 2022 (Appendix D).	
21	<b>d) Tenure, Rents and Affordability</b> i. Concerns of the unit and tenure mix reflected in some of the options in the FVA, particularly where they depart from the 80/20 rented/intermediate split outlined in Local Plan policy. Any mix that proposes a significant proportion of intermediate homes will be resisted.	See note prepared by BNP Paribas, dated 28 July 2022 (Appendix D).	See separate note.
	ii. Recommend discussions to ascertain whether the number of LAR homes can be improved through further viability negotiations and/or with the support of the Council's Housing Capital Funding.	See note prepared by BNP Paribas, dated 28 July 2022 (Appendix D).	
	iii. Request confirmation that genuinely affordable housing is being delivered including accounting for service charge levels that would be due. (It is noted LAR/social rent is exclusive of service charges and these may be a significant additional cost)	During the design phase consideration has been given to the service charge implications of the design for Building 10, and future affordable blocks.  Building 10 has it's own entrances, and the internal demise will be managed by the RP partner, to allow them to control their own costs.	

Row No.	LBRuT Comment (27 May 2022)	Applicant Response (18 August 2022)	Revised information submitted (Y/N)
		<p>This would ensure that there are no excessive service charges for services shared with other tenures/uses.</p> <p>There was no adverse comment from RPs regarding service charges when consulted, beyond an understanding that estate charges would need to be managed carefully.</p> <p>See also letter provided by RHP, dated 15 June 2022. Issued to LBRuT on 16 June 2022 (Appendix C).</p>	
22	<p><b>e) London Affordable Rented Housing</b></p> <p>i. London Affordable Rented homes are proposed as the tenure for the general needs rented elements of the scheme. However, the new Affordable Homes Programme 21-26 promotes social rent as the preferred general needs tenure, and as such the availability of grant funding to support this scheme (and in particular any grant for additional affordable housing over and above that identified within the FVA) may be limited. It should also be noted that as a scheme referable to the London Mayor the GLA are likely to promote social rent as the preferred tenure.</p>	<p>Social rented housing could be accommodated within the Proposed Development.</p> <p>This would attract a lower capital value, so the overall percentage of affordable housing would fall as a result.</p>	

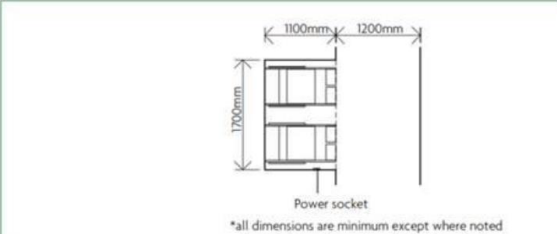
Row No.	LBRuT Comment (27 May 2022)	Applicant Response (18 August 2022)	Revised information submitted (Y/N)
	ii. As part of the viability discussions consideration is given to social rent as the preferred tenure for the general needs rented homes.	This is the subject of ongoing discussions with LBRuT.	
23	<p><b>f) Intermediate Housing</b></p> <p>i. The application seeks to offer a mix of both shared ownership and London Living Rent homes. However, it should be ensured that any intermediate homes remain genuinely affordable to Richmond residents, and to secure this the homes should meet the requirements of the Intermediate Housing Policy Statement. For clarity the following are required:</p> <ul style="list-style-type: none"> <li>• two thirds of all intermediate homes are affordable to those on household incomes of up to £50,000 per annum with the remaining third affordable to those on household incomes up to the GLA intermediate housing threshold of £90,000 per annum for shared ownership</li> <li>• The applicant/RP demonstrates affordability of sales in each scheme at an average household income of £56,200,</li> <li>• The applicant/RP are required to demonstrate in marketing plans prior to launching sales that two thirds of the homes are affordable at gross household incomes of below £50,000</li> </ul>	See note dated 13 June 2022, prepared by BNP Paribas. Issued to LBRuT on 13 June 2022 (Appendix A).	
	ii. These affordability requirements should be cross-checked as negotiations on scheme viability progress to ensure that the assumed values for shared ownership homes accurately reflect these affordability requirements.	All points consistent with previous iterations and have been accounted for.	
	iii. Any future S106 agreement must incorporate clauses that ensure the Council's adopted affordability criteria for shared ownership and intermediate rent homes is to be complied with.	See note prepared by BNP Paribas, dated 28 July 2022 (Appendix D).	

Row No.	LBRuT Comment (27 May 2022)	Applicant Response (18 August 2022)	Revised information submitted (Y/N)
	<p><b>g) Service Charges</b></p> <p>i. Overall housing costs should be affordable to the Council's income threshold for intermediate as well as those which would be assumed for general needs rent.</p> <p>ii. Provision should be made in any Section 106 to secure affordability having regard to confirmed service charge levels.</p>	See note prepared by BNP Paribas, dated 28 July 2022 (Appendix D).	
24	<p><b>h) Wheelchair Accessible homes - s106 to ensure:</b></p> <p>A. Council's minimum requirement for 10% of the units are to be provided and to ensure compliance with M4(3)</p>	Plans have been reviewed and updated to ensure that 10% of the units in Buildings 18 and 19 are compliant.	Y – updated plans.
	B. enable the Specialist Occupational Therapist to liaise with the developer in order to ensure that the identified homes are constructed to Building Regulation requirements (M4(3)(2)(b).	Noted	
25	<b>i) Amenity Space</b> - Details of the arrangements for the management of the communal amenity areas to avoid segregation and to ensure that all residents of affordable housing blocks have access to amenity space areas should be secured in the Section 106 agreement.	Noted	
26	<b>j) Parking</b> - Confirmation that the parking for the wheelchair homes is genuinely accessible for the end user is required.	All parking for wheelchair homes is fully and genuinely accessible	
27	<p><b>k) Public Grant funding</b></p> <p>i. Need for discussions prior to determination with the aim of the adjusting the approved affordable housing (unit numbers and/or tenure mix) with public grant (Richmond Housing Capital Programme funding)</p>	See note prepared by BNP Paribas, dated 28 July 2022 (Appendix D).	



Row No.	LBRuT Comment (27 May 2022)	Applicant Response (18 August 2022)	Revised information submitted (Y/N)
	ii. review mechanisms developed to consider both the level and tenure mix of affordable housing delivered to achieve a better level of policy compliancy.	See note prepared by BNP Paribas, dated 28 July 2022 (Appendix D).	
	iii. review to assess the impact of Council Housing Capital Grant support (if not confirmed prior to determination) to improve the number of affordable units and/or to improve the tenure mix.	See note prepared by BNP Paribas, dated 28 July 2022 (Appendix D).	
28	<p><b>l) s106 requirements</b></p> <p>i. affordability of the intermediate housing across a range of household incomes through the share purchased and the level of rent on the unsold equity including a requirement that the Registered Provider should set the equity share and rent on the unsold equity in order to achieve the Council's requirement that homes are affordable for a household income of £50,000.</p> <p>ii. confirmation the affordability of all the affordable homes takes account of service charges.</p> <p>iii. Review clauses to increase both numbers and increase in the number of homes for Affordable Rent so the scheme meets a tenure mix which is more compliant with Local and London Plan requirements) through the application of Richmond Housing Capital Grant funding and through review mechanisms:</p> <p>iv. Ensuring that the inputs, including deficit position, are fully evidenced and tested.</p> <p>v. An Early Stage Review if the planning permission is not commenced within and agreed timescale.</p> <p>vi. A Public Grant Review prior to commencement to assess the potential for public grant (both Mayoral and from the Council's Housing Capital Programme) to increase the amount and/or alter the tenure of the affordable housing to improve affordable rented delivery.</p> <p>vii. residents' access to the proposed communal areas</p> <p>viii. Consultation and engagement with Council's Specialist Occupational Therapist</p>	See note prepared by BNP Paribas, dated 28 July 2022 (Appendix D).	
	<b>5. Housing - Accessible</b>		

Row No.	LBRuT Comment (27 May 2022)	Applicant Response (18 August 2022)	Revised information submitted (Y/N)
29	A. Design and Access Statement - Confirm power assisted doors will be fully automatic to cater for a wide variety of needs	Power assisted doors will be incorporated.	
30	B. Schedule of accommodation for the affordable homes (although these only state 'potential social rent', no intermediate?): <ul style="list-style-type: none"> <li>• Building 18 (potential social rent): 7x 3b6p &amp; 1x 2b4p</li> <li>• Building 19 (potential social rent): 4x 1b2p &amp; 1x 2b4p</li> </ul> i. All these homes are a suitable size as M4(3) homes. However:	See Squires' responses below.	
	<ul style="list-style-type: none"> <li>• too many 3b6p homes. Request 2 less 3b6p and more 2b4p. 1b2p numbers are suitable.</li> </ul>	This is in outline and the final mix will be determined in Detail but further M4(3) wheelchair accessible apartments have been identified to get 17 total in B18/B19 which equates to 10%.	
	<ul style="list-style-type: none"> <li>• There should be 17x M4(3) homes (to be at least 10%) but there are only 13 shown on this schedule.</li> </ul>	This is in outline and the final mix will be determined in detail but further M4(3) wheelchair accessible apartments have been identified to get 17 total in B18/B19 which equates to 10%.	Y- updated plans.
31	C. Plans: i. The homes are a good size, although some are an awkward shape. ii. The plans will need to be adjusted and also apply the same principles to the social rent homes when they complete those plans: a) check locations of wheelchair charge spaces: to ensure that they do not encroach on corridor width. Most are not compliant – they block	Noted – can be dealt with at RMA stage.	

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	<p>hallways completely, reduce widths of hallways, block doorways or block storage cupboards). It is suggested you check M4(3) to see how this should be positioned –imagine that 2 wheelchairs are sitting in the dedicated wheelchair charge space (which cannot be shared with any other space), and then need 1200mm space next to the charge space (the same width as the rest of the hallways, to enable a wheelchair user to turn into the space) – see below:</p>  <p>Diagram 3.6 Wheelchair storage and transfer space</p> <ul style="list-style-type: none"> <li>b) space inside front door: the 1800x1500 space is not always the correct way round (check M4(3) for details)</li> <li>c) door nibs: some of these do not comply with M4(3)</li> <li>d) ensure they include ALL furniture which Part M requires</li> <li>e) accessible layouts: both adaptable and accessible layouts should be provided</li> <li>f) balconies: need to show balconies and compliant turning spaces (and all doors onto balconies also need to achieve clear opening width of 850mm)</li> </ul>		
32	<p><b>D. Inclusive and Accessible Design Standards:</b></p> <ul style="list-style-type: none"> <li>i. The applicant is encouraged to apply the same standards throughout on the M4(2) home designs or the private dwellings.</li> <li>ii. The applicant is recommended to complete the M4(2) and M4(3) checklists (and continue to do so at various design stages) which will help to ensure that the development meets all the requirements</li> </ul>	Noted	

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<b>Ecology</b>			
33	<p>A. Ecology reports (PEA and PSR dated March 2022) - Surveys have all been carried out in October 2021 – therefore not following their own (or the BCT 2016 guidance) recommendations (para 5.18 of the PEA dated March 2022) for surveys to be carried out either 2 with a two week break or monthly for 3 months (between May to August). The Protected Species report (para 2.15) states that the reason for this is due to the previous planning application programme hearing in July 2021, it then goes on to say that this is not a constraint due to the historical surveys carried out “providing a robust baseline data” and “further surveys will be carried to determine if amendments are necessary to the mitigation measure currently being proposed and to inform a licence application for NE”. However, each survey is respectfully 3 years, 1 month and 2 years, 1 month apart, which is out of date and not as per the guidance.</p> <p>i. Internal surveys are still not supplied despite the availability of drones and other technology that could assist.</p> <p>ii. The Dec 2019 EIA has the Maltings wrongly numbered as B9 not B8.</p> <p>iii. The LPA expect a fully compliant suite of bat surveys over the summer period for a site of this complexity and size adjacent to the River Thames in the north and connecting to the railway and beyond in the south. The survey report needs to contain raw data and a plan to show the movement of bats seen on site.</p> <p>The LPA cannot assess or comment on these applications fully without the relevant and in date surveys, therefore have no alternative but to recommend refusal due to lack of Protected Species information at this time.</p>	<p>Ecological surveys being undertaken on site over summer 2022. Scope of surveys was discussed and agreed at a meeting dated 6 July 2022.</p>	<p>Y – to be prepared</p>
34	<p><u>Other comments:</u></p> <p>B. Demonstrate the new windows/internal light spill will not spill onto the river corridor or tree canopies, especially as brown long-eared bats have been recorded.</p>	<p>Given the final lighting design has not been designed at this stage, we would expect this to be dealt with via a condition</p>	

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		<p>for the final lighting design to be mindful of light spill to the river with lighting designed in compliance with the guidance published by the Institute of Lighting Professionals (ILP).</p> <p>This is as anticipated within the ecology chapter (para 13.149).</p>	
	<p>C. Is there any reason why the meadow grassland by the school is not be included in the public realm area? What will the school be using it for? This would be a great addition to the public.</p>	<p>It is included. see - P10736-00-004-0701-03 Amenity Space and Green Space Calculation</p>	
	<p>D. Uplighting of trees and buildings in the squares is not acceptable</p>	<p>Uplighting has been removed from the proposals – see updated lighting plans refs:</p> <ul style="list-style-type: none"> <li>- 547-(001)-DR-EX-MP-B,</li> <li>- 547-(002)-DR-EX-MP-B,</li> <li>- 547-(005)-DR-EX-MP-B,</li> <li>- 547-(500)-CA-EX-MP-B.</li> </ul>	<p>Y – updated plans</p>
	<p>E. The Peregrine falcon is a real asset for the site and there is concern that carrying out phase 1 works adjacent to the potential nesting location will scare it away – this will need to be considered by a falcon expert.</p>	<p>Please see meeting notes from meeting held on 7 July 22 with LBRuT planning and ecology officers. The meeting notes were issued to LBRuT on 18 July 2022.</p>	

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		<p>Waterman IE have also provided the following response: We are in agreement that the peregrine falcon is an asset for the Site and local area. As detailed in the Ecology Chapter that supported the EIA, mitigation measures have been provided both during the post the Development.</p> <p>During the construction period a CEMP will detail the requirement for an Ecological Clerk of Works (ECoW) who is a recognized peregrine falcon expert to monitor the roost site at the Maltings until it can be confirmed that the peregrine is absent from the building. Works will then be undertaken at the Maltings to block access points previously utilised. Monitoring will continue prior to the refurbishment works commencing at the Maltings to ensure the bird does not return to the roost site. In</p>	

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		<p>addition, and as a precautionary approach, and to avoid any potential disturbance events (given only a single peregrine falcon was recorded on site) the refurbishment works at the Site would be timed to commence outside of the main peregrine falcon breeding season (assessed to be between February / March when courtship intensifies to June when the young normally fledge).</p> <p>As part of the completed development a peregrine falcon nest box will be incorporated into the roof of the Maltings after the refurbishment works have been completed. This would be subject to a suitably worded planning condition. It is envisaged that this work would be overseen by an Ecological Clerk of Works (ECoW) who is a recognized peregrine falcon expert.</p>	

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		A 'Landscape and Environment Management Plan' (LEMP), will also be provided as part of the completed development to ensure the peregrine nesting box has the best possible chance of uptake. The LEMP will ensure no direct lighting of the box and that measure are put in place for monitoring.	
	F. What is the sqm of the biodiversity planting/area and where is it? it should not be the same planting areas as the play areas	Blending biodiverse areas with other open space areas (including playspace zones) is a common and appropriate approach. This is consistent with the play strategy, where play and nature are merged into one creating an immersive play experience for children. Please consult the UGF for sqm of each of the landscape typologies.	
	G. Plant species acceptable, except the crocosmia – this is a non-native species	The planting palette is indicative and it will be further developed at later stages - comment noted.	
<b>Waste</b>			
35	A. Commercial waste: Para 4.3.7 states: The actual provision for non-residential waste will be dictated by the incoming tenants/occupiers and their	The non-residential waste will be stored in the back of house	



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	waste contractors. It must be ensured that sufficient space for commercial waste storage is provided as it can be difficult to add at a later date. Where is the space for the commercial waste on the plans?	areas in each individual unit and stored separately from the residential waste stores in Development Area 1. The size of each bin store will be determined by the use of each unit.	
36	<p>B. Domestic waste</p> <p>i. Require a S106:</p> <ul style="list-style-type: none"> <li>• for contributions towards a second delivery or for this to be private collection</li> <li>• towable recycling bins</li> <li>• facilities management ensure constant access to bins – where double stacked</li> </ul>	Noted	
	ii. There is potentially an error in the totals on table 4-2 which when added come to 565 properties rather than 558.	ii – Noted error on total figure for 1 bed and 2 bed. Table is updated in the revised OWMP – Rev E.	Y – Waste Management Plan-Rev E
	iii. Table 4-4 – the 3 and 4 bed houses must also be provided with suitable space to store 2 x 55L recycling boxes and 1 x 23L food waste box each	Noted, all townhouses have gardens where refuse can be stored in a compliant way.	

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	iv. Para 5.2.3 – states that space for a 23L food waste container be provided in each flat. It is unpractical to collect 585 individual caddies therefore space should be provided in each bin store for communal 240L bins on the basis of 23L per property.	240l food bin added.	Y – Waste Management Plan-Rev E
	v. how will food waste wheelee bins are transported from basement level to ground floor collection points, it is unlikely that these bins could be towed.	No longer transported. All bins at ground floor (GF) Level	Y – Waste Management Plan-Rev E
	vi. Its noted from Appendix B that 1100L bins (refuse, paper/card and mixed containers) are to be towed from bin lifts to the collection points. The council cannot provide towable recycling bins free of charge and they must be supplied and maintained at the cost of the development in perpetuity. Collection crews may refuse to empty any bins that are not maintained to a safe working level.	No longer transported. All bins at GF Level.	Y – Waste Management Plan-Rev E
	vii. It should be noted that towing bins puts excess wear on the moving parts. Special reinforced bins suitable for towing should be provided.	No longer transported. All bins at GF Level.	Y – Waste Management Plan-Rev E
	viii. Tow routes should be smooth and free of cobbles etc. Even speed bumps can cause significant damage to the wheels and castors on towable bins.	No longer transported. All bins at GF Level.	Y – Waste Management Plan-Rev E

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	ix. Where are the ground floor collection points for those blocks where waste is stored at basement level? These should be shown on plan illustrating that they are adequately sized to temporarily hold ALL bins awaiting collection.	No longer transported. All bins at GF Level.	Y – Waste Management Plan-Rev E
	x. 6.1.11 states that the collection point for building 4 is located 27m from the nearest point the refuse collection vehicle can wait – this has not been agreed with the waste service	Design revised, now 20m max for all bins stores.	Y – Waste Management Plan-Rev E
	xi. In a couple of instances bins are double stacked in the bin store making some of them inaccessible. It is stated that facilities management will ensure constant access to bins, this arrangement should be made legally binding in perpetuity.	No longer double stacked.	Y – Waste Management Plan-Rev E
	xii. For basement bin stores where bins are transferred to ground floor collection areas it is essential that 3 x additional 1100L bins are provided for each store to remain in the bin store on collection day for use whilst the rest of the bins are in the collection point. These could be stored elsewhere on site during the week and transferred to the relevant stores on collection day.	No longer transported. All bins at GF Level	Y – Waste Management Plan-Rev E
	xiii. Any push route between bin store / collection point to the waiting collection vehicle should be hardstanding/smooth and free of steps or steep slopes. Dropped kerbs are essential where relevant along the route.	Noted. Dropped kerbs will be located along all routes.	
	xiv. It is noted that bin stores for blocks 2 & 3, 7 & 8 and 11 & 12 are shared. Residents should not have to carry waste in excess of 30m (horizontal travel, excluding lifts/stairs). It's not clear if any of the flats in blocks that don't have their own bin store would exceed this?	Noted, bin stores are within 30m distance now at GF level.	Y – Waste Management Plan-Rev E

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	xv. Officers cannot locate the space in each store set aside for the temporary storage of bulky waste, despite it being referenced in 6.1.2	Bulky waste stores provided in majority of bin stores.	Y – Waste Management Plan-Rev E
	xvi. In a number of locations the bin storage does not meet minimum requirements. The table below sets out the minimum SPD requirements for once weekly (preferred) and twice weekly, also showing how many bin spaces are shown on plan and where any shortfall/surplus occurs. For clarity, as its not possibly to provide 'part bins' it has been rounded up to ensure that minimum requirements are met.	Noted, bin stores have been updated.	Y – Waste Management Plan-Rev E
37	C. Development area 2 a. Further details to be secured via condition / reserved matters. b. There is a contraction in paras 6.2.1 which states the proposal is for twice weekly collections and para 6.2.10 which states weekly. The council will only accept weekly waste collections.	Development Area 2 is once per week collection.	
	<b>Trees</b>		
38	To fully consider this application, there are areas that require clarification, amendment or additional information before final comments can be made.	Please see document prepared by Waterman IE, dated 27 July 2022, titled 'Briefing Note – Response to Consultee Comments on Arboriculture' (ref: WIE18671-114-BN-3.3.2-Arboriculture Response) (Appendix E).	
39	<b>Further detail required:</b> a) CAVAT: The LPA will require a tree-by-tree "Full" CAVAT valuation (Including the calculation methodology for each tree), to be included for each tree in the tree survey and undertaken by an Arboriculturist experienced in using the method. This is to ensure that any loss of amenity from tree removals is, as a	See paragraphs 2.2-2.8 of the document prepared by Waterman IE, dated 27 July 2022, titled 'Briefing Note –	

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	<p>minimum, commensurate with the value of the new tree planting proposals. Individual CAVAT valuation will be an integral part of ensuring that all retained trees, both within and adjacent to the site, will receive appropriate protection during the preparation, demolition, construction and conclusion phases of a long and complex project.</p> <p>o This is to include the 3x Local Authority Street trees flagged for removal (T107, T152 &amp; T333), whose CAVAT valuation will be used to secure remuneration for off-site replacement tree planting in the public realm via a section 106 payment.</p>	<p>Response to Consultee Comments on 'Arboriculture' (ref: WIE18671-114-BN-3.3.2-Arboriculture Response) (Appendix E).</p>	
40	<p>b) Mortlake Green Access - Page 14 of the "Landscape Design and Access Statement, Rev 01 dated March 2022" states that "No trees in Mortlake Green are proposed to be affected" and that "Pavements within Tree Protection Zones of existing trees in the park will be designed and detailed to avoid deep excavation and limit impact on existing root systems". From viewing the red line boundary there are several LA owned trees, including 2x street trees (T317 &amp; T316), whose roots could be impacted by this proposed access. Council will expect the impacts of any proposed hard surfacing to be assessed in relation to the below and above ground constraints on existing trees, including those in the park and a no-dig solution used. All trees potentially impacted by these works will require a CAVAT valuation – include in survey.</p>	<p>See paragraphs 2.9-2.14 of the document prepared by Waterman IE, dated 27 July 2022, titled 'Briefing Note – Response to Consultee Comments on 'Arboriculture' (ref: WIE18671-114-BN-3.3.2-Arboriculture Response) (Appendix E).</p>	
41	<p>c) Tree Root protection Areas (RPA). – update and provide existing site conditions.</p> <p>When illustrating the RPA of any tree, both on and adjacent to the site, BS5837 (Trees in relation to design, demolition and construction - Recommendations: 2012) Section 4.6.2. specifies the following;</p> <ul style="list-style-type: none"> <li>• "Where pre-existing site conditions or other factors indicate that rooting has occurred asymmetrically, a polygon of equivalent area should be produced. Modifications to the shape of the RPA should reflect a soundly based Arboricultural assessment of likely root distribution."</li> </ul>	<p>See paragraphs 2.15-2.18 of the document prepared by Waterman IE, dated 27 July 2022, titled 'Briefing Note – Response to Consultee Comments on 'Arboriculture' (ref: WIE18671-114-BN-3.3.2-Arboriculture Response) (Appendix E).</p>	

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	<ul style="list-style-type: none"> <li>• These modifications are to account for and include but not be limited to "The morphology and disposition of the roots, when influenced by past or existing site conditions (e.g. the presence of roads, structures and underground apparatus)"</li> <li>• RPA's in submitted Tree Constraint Plans (TCP) and Tree Protection Plans (TPP) must be calculated and modified to account for asymmetric root development in the proximity of existing structures and hard surfacing as part of the full application.</li> </ul>		
42	d) Shading - The impact of shading needs to be assessed and incorporated as part of the submitted Arboricultural documentation. There is also an increased risk that such shading will lead to an increase in post-development pressure on affected trees for their eventual removal. It must be stipulated that any such future requests for tree removal for these reasons will be resisted as per the Councils Local plan and tree policy.	See paragraphs 2.19-2.24 of the document prepared by Waterman IE, dated 27 July 2022, titled 'Briefing Note – Response to Consultee Comments on Arboriculture' (ref: WIE18671-114-BN-3.3.2-Arboriculture Response) (Appendix E).	
43	e) Lighting Provision - "Proposed Site Wide Landscape GA Plan Ref: P10736-00-004-GIL-0101, dated 11/03/2022" that there are numerous, potential conflicts between lighting positioning in relation to newly planted trees, with some lighting columns being positioned either adjacent to or within the plotted canopies of proposed trees. The positioning and design of lighting in relation to proposed and exiting trees needs to be carefully considered regarding potential obstructions, with particular attention given to the requirement for increased management and maintenance of these trees as they grow. Potential obstructions need to be highlighted and alternative lighting positions submitted and agreed by the LPA in cases where such conflicts are identified. – construction within root zones / services / canopy / illumination.	See paragraph 2.25 of the document prepared by Waterman IE, dated 27 July 2022, titled 'Briefing Note – Response to Consultee Comments on Arboriculture' (ref: WIE18671-114-BN-3.3.2-Arboriculture Response) (Appendix E).	
44	f) Hard Surfacing and Footpaths - areas of hard surfacing areas within the RPA of retained trees must use a permanent no-dig solution (ie.cellweb), not just	See paragraphs 2.26-2.27 of the document prepared by	

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	as protection measures during the demolition and construction phase, but also potential temporary access route to Mortlake green. Further details of design, detail, cross sections are required.	Waterman IE, dated 27 July 2022, titled 'Briefing Note – Response to Consultee Comments on Arboriculture' (ref: WIE18671-114-BN-3.3.2-Arboriculture Response) (Appendix E).	
45	<p><b>Necessary amendments:</b></p> <p>g) Tree protection - Section 8.13 of the report states "Tree protection should generally accord with the recommendations contained within BS5837:2012".</p> <p>o Replace the words "Generally" and "Should" with "Will", unless otherwise previously agreed in writing with the local planning authority.</p>	<p>This point is accepted, and the report has been updated accordingly.</p> <p>See updated Arboricultural Impact Assessment, prepared by Waterman IE, dated 27 July 2022.</p>	Y – updated report.
46	<p><b>Recommended Conditions:</b></p> <p>h) Tree planting - further information / detail</p> <p>i) Foundation design - details of foundation design and methodology for installation and construction that does not deleteriously impact nearby trees.</p> <p>j) Underground services - Impact on the roots of retained trees properly assessed. Where a conflict is identified, a methodology of installation that avoids damage to tree roots must be submitted to the LPA for approval.</p> <p>k) Tree protection</p>	See paragraphs 2.30-2.31 of the document prepared by Waterman IE, dated 27 July 2022, titled 'Briefing Note – Response to Consultee Comments on Arboriculture' (ref: WIE18671-114-BN-3.3.2-Arboriculture Response) (Appendix E).	
	<p>Recommended informatives:</p> <p>l) Foundation Design and a firm commitment made to the use of "Minimally invasive foundations" within RPA's of retained trees, where there is an incursion.</p>	See paragraphs 2.30-2.31 of the document prepared by Waterman IE, dated 27 July 2022, titled 'Briefing Note – Response to Consultee Comments on	

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		Arboriculture' (ref: WIE18671-114-BN-3.3.2-Arboriculture Response) (Appendix E).	
47	<b>8. Parks Department</b> A. Playspace - Require a sitewide landscape plan with the play space boundaries marked on and labelled with the area measurement in square metres	See plan ref: P10736-00-004-GIL-0800, prepared by Gillespies.	Y – plan provided
48	B. Towpath - Recommend conditions / heads of terms	Clarification required as to suggested wording	
49	C. Mortlake Green - The pedestrian circulation drawing from 22/0900/FUL and school travel plan in 22/0902/OUT shows two routes being used through Mortlake Green, including as an off-road cycle route; this supports the LPAs argument that two routes will need to be widened / re-landscaped through the park. The Parks team will look into this and provide an updated quote to discuss as part of the potential s106 arrangements.	This is correct - See drawing ref: P10736-00-004-GIL-0125 of the Landscape drawing pack, prepared by Gillespies.	
50	D. Discussions on the other aspects of the S106 to follow	Noted – please issue when ready.	
<b>9. Environmental Health – water c</b>			
51	<b>Policy framework</b> o Local Plan: At least Emissions Neutral o London Plan: o Should not lead to further deterioration of existing poor air quality o Should not create unacceptable risk of high levels of exposure to poor air quality o Developments must be at least Air Quality Neutral o Masterplans, subject to an EIA, should consider how air quality can be improved as part of an air quality positive approach.	Noted	



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	<p><b>A. Air quality neutral.</b></p> <p>i. consultant’s assessment illustrates it is not air quality neutral for transport emissions and therefore substantial mitigation required or refusal.</p>	<p>Please see para 1.2 of note, prepared by Waterman IE, dated June 2022 (Appendix F).</p> <p>Further comments have since been issued by LBRuT, prepared by AQE Global, dated July 2022.</p> <p>Waterman IE have provided an Air Quality Assessment update in the ES Statement of Conformity at Annex 2 (Appendix G) and a further response document, titled: ‘Air Quality Responses’, dated August 2022 (Appendix H).</p>	<p>Y – note issued to LBRuT on 29 June 2022.</p> <p>Y- Annex 2 of the ES Statement of Conformity.</p> <p>Y – Air Quality Responses, dated August 2022.</p>
	<p>ii. An analysis of the air quality neutral calculations for the proposed development reported in the ES Chapter Air Quality Neutral have indicated an inappropriate methodology and assumption has been applied to the Flexible uses category. The applicant has not calculated the benchmarks correctly. Tables 1, 2 and 3 below indicate the nature of each land use under evaluation in this application in terms of air quality neutral status.</p>	<p>Please see paras 1.6-1.8 of note, prepared by Waterman IE, dated June 2022 (Appendix F).</p> <p>Further comments have since been issued by LBRuT, prepared by AQE Global, dated July 2022.</p> <p>Waterman IE have provided an Air Quality Assessment update in the ES Statement of</p>	

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		Conformity at Annex 2 (Appendix G) and a further response document, titled: 'Air Quality Responses', dated August 2022 (Appendix H).	
	<p>iii. In calculating the transport benchmarks for this group, as no emissions benchmark for classes A2, A3, A4, D1 and D2 are available, B1 use was applied as a proxy. However, when calculating the proposed development transport emissions, an average of the A1 and B1 uses was used. This is an erroneous approach given that two different entities are being compared (comparing Benchmark using B1 only with proposed development value using average of A1 and B1; this is comparing apples and pears).</p>	<p>Please see paras 1.6-1.8 of note, prepared by Waterman IE, dated June 2022 (Appendix F).</p> <p>Further comments have since been issued by LBRuT, prepared by AQE Global, dated July 2022.</p> <p>Waterman IE have provided an Air Quality Assessment update in the ES Statement of Conformity at Annex 2 (Appendix G) and a further response document, titled: 'Air Quality Responses', dated August 2022 (Appendix H).</p>	
	<p>iv. Furthermore, the average of A1 and B1 is less conservative than B1. Once again, a conservative approach is required so that the appropriate level of mitigation is ascertained and suitable mitigation measures are agreed, deployed and monitored.</p>	<p>Please see paras 1.6-1.8 of note, prepared by Waterman IE, dated June 2022 (Appendix F).</p> <p>Further comments have since been issued by LBRuT,</p>	

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		<p>prepared by AQE Global, dated July 2022.</p> <p>Waterman IE have provided an Air Quality Assessment update in the ES Statement of Conformity at Annex 2 (Appendix G) and a further response document, titled: 'Air Quality Responses', dated August 2022 (Appendix H).</p>	
52	<p><b>B. Damage cost and mitigation measures:</b></p> <p>i. Current LAQM measures not sufficient to reduce air pollution</p> <p>ii. Specific land use classes will require specific mitigation and therefore tailored mitigation is to be devised and deployed. Where this is not practical or desirable, pollutant off-setting will be applied.</p> <p>iii. The level of mitigation required associated with the operation phase of the proposed development was calculated using Defra's Damage Cost Approach<sup>1</sup> over the estimated lifetime of the proposed development. The approach applied in using total emissions in this instance takes into account the fact that the area is highly polluted and that no additional emissions are acceptable (given the need to safeguard human health in the area the current situation is unacceptable and needs improvement)</p> <p>iv. The level of total emissions associated with the operation of the proposed development (taking traffic emissions into account only) equates to a mitigation level required of £2,618,642. – To deliver its air quality local action plan and or implement specific measures on/along the road network affected by the proposal that reduce vehicle emissions and or reduces human exposure to nitrogen dioxide and particulate matter levels aiming at safeguarding human health.</p>	<p>Please see para 2.6 of note, prepared by Waterman IE, dated June 2022 (Appendix F).</p> <p>Further comments have since been issued by LBRuT, prepared by AQE Global, dated July 2022.</p> <p>Waterman IE have provided an Air Quality Assessment update in the ES Statement of Conformity at Annex 2 (Appendix G) and a further response document, titled: 'Air Quality Responses', dated August 2022 (Appendix H).</p>	<p>Y – note issued to LBRuT on 29 June 2022.</p> <p>Y- Annex 2 of the ES Statement of Conformity.</p> <p>Y – Air Quality Responses, dated August 2022.</p>

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	v. To make the proposal air quality neutral (but still not air quality positive as sought by the London Plan) would be £415,604. Therefore, to make the proposed development acceptable, a Section 106 (S106) contribution is to be secured of a value to be agreed between £415,604 and £2,618,642.		
53	C. Demolition - Suitable mitigation (as set out later in the ES Air Quality Chapter) is required	<p>Please see paras 3.2-3.3 of note, prepared by Waterman IE, dated June 2022 (Appendix F).</p> <p>Further comments have since been issued by LBRuT, prepared by AQE Global, dated July 2022.</p> <p>Waterman IE have provided an Air Quality Assessment update in the ES Statement of Conformity at Annex 2 (Appendix G) and a further response document, titled: 'Air Quality Responses', dated August 2022 (Appendix H).</p>	<p>Y – note issued to LBRuT on 29 June 2022.</p> <p>Y- Annex 2 of the ES Statement of Conformity.</p> <p>Y – Air Quality Responses, dated August 2022.</p>
54	<p>D. Input data and assumptions:</p> <p>i. Vehicle emissions used: a conservative approach should be applied in the assumption. It is standard practice to assume at least a couple of years delay in the fleet composition as defined in the Emission Factor Toolkit database to account for a lower vehicle fleet turnover rate (for instance, to predict ambient air concentrations for 2029, 2026 or 2027 vehicle emissions should had been used instead for a more realistic – and conservative approach).</p>	<p>Please see paras 3.2-3.3 of note, prepared by Waterman IE, dated June 2022 (Appendix F).</p> <p>Further comments have since been issued by LBRuT,</p>	<p>Y – note issued to LBRuT on 29 June 2022.</p> <p>Y- Annex 2 of the ES Statement of Conformity.</p>

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		<p>prepared by AQE Global, dated July 2022.</p> <p>Waterman IE have provided an Air Quality Assessment update in the ES Statement of Conformity at Annex 2 (Appendix G) and a further response document, titled: 'Air Quality Responses', dated August 2022 (Appendix H).</p>	<p>Y – Air Quality Responses, dated August 2022.</p>
	<p>ii. Background years used: the submission assumes pollution backgrounds are declining as per DEFRA's estimated declining rates overtime which are equally optimistic. Background levels should be conservative, and in line with earlier vehicle composition years of 2026 or 2027 (see above). To support the above, the baseline pollution levels reported in the ES Air Quality Chapter are lower in comparison to the both the LBRUT monitoring results for 2019 and LAEI modelled results for the same year. Therefore, predictions made for the opening year pollution levels are also like to be underestimated</p>	<p>Please see paras 3.5-3.8 of note, prepared by Waterman IE, dated June 2022 (Appendix F).</p> <p>Further comments have since been issued by LBRuT, prepared by AQE Global, dated July 2022.</p> <p>Waterman IE have provided an Air Quality Assessment update in the ES Statement of Conformity at Annex 2 (Appendix G) and a further response document, titled: 'Air Quality Responses', dated August 2022 (Appendix H).</p>	<p>Y – note issued to LBRuT on 29 June 2022.</p> <p>Y- Annex 2 of the ES Statement of Conformity.</p> <p>Y – Air Quality Responses, dated August 2022.</p>

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	<p>iii. The monitoring results in Table 10.12 indicate that 9 of the 10 diffusion tube monitoring locations closest to the Site were at or exceeded the annual mean NO<sub>2</sub> objective of 40µg/m<sup>3</sup> between 2015 and 2019. However, eight of the nine diffusion tubes, where data is available, recorded a reduction in the monitored annual mean NO<sub>2</sub> concentration from 2018 to 2019. The annual mean NO<sub>2</sub> concentration at the other diffusion tube on Mortlake Road remained the same.</p> <ul style="list-style-type: none"> <li>• This is in line with most of London but is not true here.</li> <li>• The most relevantly located diffusion tube – site 74 - near Chalker’s Corner increased from 50ug/m<sup>3</sup> up to 52ug/m<sup>3</sup> from 2018 to 2019, which is very unusual, bucking national and local trends; with distance correction for the residential façade, this measures 49.6ug/m<sup>3</sup>. This is high before moving the junction closer and highly significant for this development.</li> <li>• This LBRUT monitoring data is backed up by LAEI modelling data – see attached consultant’s report and maps.</li> </ul>	<p>Please see para 3.11 of note, prepared by Waterman IE, dated June 2022 (Appendix F).</p> <p>Further comments have since been issued by LBRuT, prepared by AQE Global, dated July 2022.</p> <p>Waterman IE have provided an Air Quality Assessment update in the ES Statement of Conformity at Annex 2 (Appendix G) and a further response document, titled: ‘Air Quality Responses’, dated August 2022 (Appendix H).</p>	<p>Y – note issued to LBRuT on 29 June 2022.</p> <p>Y- Annex 2 of the ES Statement of Conformity.</p> <p>Y – Air Quality Responses, dated August 2022.</p>
55	<p>E. Model verification and adjustment - It is noted that during consultation, the EHO at LBRuT requested that urban background concentrations from the Wetlands Centre, Barnes were used in the air quality assessment. However, background concentrations from Defra’s predictions have been used instead. This is not supported; local measurements should had been used to ensure a robust assessment. Given that verification and adjustment is compared with and applied on modelled road NO<sub>x</sub> concentrations, the higher the background values used in the baseline year, the lower the traffic contributions derived and the lower the adjustment factor required, which, again, does not provide a conservative approach.</p>	<p>Please see para 4.2 of note, prepared by Waterman IE, dated June 2022 (Appendix F).</p> <p>Further comments have since been issued by LBRuT, prepared by AQE Global, dated July 2022.</p> <p>Waterman IE have provided an Air Quality Assessment update in the ES Statement of Conformity at Annex 2</p>	<p>Y – note issued to LBRuT on 29 June 2022.</p> <p>Y- Annex 2 of the ES Statement of Conformity.</p> <p>Y – Air Quality Responses, dated August 2022.</p>

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		(Appendix G) and a further response document, titled: 'Air Quality Responses', dated August 2022 (Appendix H).	
56	<p>F. Emissions from additional transport:</p> <p>i. additional transport emissions on roads and junctions, in particular at Chalkers Corner, already overcapacity, resulting in queueing, idling traffic for many hours of the day, not just at peak. This is particularly relevant with a failed TEB.</p>	<p>Please see paras 5.3-5.4 of note, prepared by Waterman IE, dated June 2022 (Appendix F).</p> <p>Further comments have since been issued by LBRuT, prepared by AQE Global, dated July 2022.</p> <p>Waterman IE have provided an Air Quality Assessment update in the ES Statement of Conformity at Annex 2 (Appendix G) and a further response document, titled: 'Air Quality Responses', dated August 2022 (Appendix H).</p>	<p>Y – note issued to LBRuT on 29 June 2022.</p> <p>Y- Annex 2 of the ES Statement of Conformity.</p> <p>Y – Air Quality Responses, dated August 2022.</p>
57	<p>ii. In the Stantec report, speed appears over optimistic which is likely to further under represent emissions. This needs reviewing.</p>	<p>Please see para 5.6 of note, prepared by Waterman IE, dated June 2022 (Appendix F).</p> <p>Further comments have since been issued by LBRuT, prepared by AQE Global, dated July 2022.</p>	<p>Y – note issued to LBRuT on 29 June 2022.</p> <p>Y- Annex 2 of the ES Statement of Conformity.</p>

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		Waterman IE have provided an Air Quality Assessment update in the ES Statement of Conformity at Annex 2 (Appendix G) and a further response document, titled: 'Air Quality Responses', dated August 2022 (Appendix H).	Y – Air Quality Responses, dated August 2022.
58	G. Questionable Monitoring data: i. The 6 monthly monitoring data (deploying two NO2 diffusion tubes at 10 monitoring sites), contained in a separate Waterman's document "Air Quality Monitoring Report" and on which significant reliance is placed, is questionable.	Please see para 6.2 of note, prepared by Waterman IE, dated June 2022 (Appendix F).  Further comments have since been issued by LBRuT, prepared by AQE Global, dated July 2022.  Waterman IE have provided an Air Quality Assessment update in the ES Statement of Conformity at Annex 2 (Appendix G) and a further response document, titled: 'Air Quality Responses', dated August 2022 (Appendix H).	Y – note issued to LBRuT on 29 June 2022.  Y- Annex 2 of the ES Statement of Conformity.  Y – Air Quality Responses, dated August 2022.



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	a) no information on the location of the monitoring sites used is provided	<p>Please see para 6.4 of note, prepared by Waterman IE, dated June 2022 (Appendix F).</p> <p>Further comments have since been issued by LBRuT, prepared by AQE Global, dated July 2022.</p> <p>Waterman IE have provided an Air Quality Assessment update in the ES Statement of Conformity at Annex 2 (Appendix G) and a further response document, titled: 'Air Quality Responses', dated August 2022 (Appendix H).</p>	<p>Y – note issued to LBRuT on 29 June 2022.</p> <p>Y- Annex 2 of the ES Statement of Conformity.</p> <p>Y – Air Quality Responses, dated August 2022.</p>
	b) no tabulation of the eastings and northings nor mapping of locations were provided - Figure A1 is missing). Accurate location details (eastings/northings) are crucial to calculate exposure at the façade;	<p>Please see para 6.6 of note, prepared by Waterman IE, dated June 2022 (Appendix F).</p> <p>Further comments have since been issued by LBRuT, prepared by AQE Global, dated July 2022.</p> <p>Waterman IE have provided an Air Quality Assessment update in the ES Statement of Conformity at Annex 2</p>	<p>Y – note issued to LBRuT on 29 June 2022.</p> <p>Y- Annex 2 of the ES Statement of Conformity.</p> <p>Y – Air Quality Responses, dated August 2022.</p>

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		(Appendix G) and a further response document, titled: 'Air Quality Responses', dated August 2022 (Appendix H).	
	c) more recent, and complete monitoring information is available to ascertain the baseline conditions to the application site, as published by LBRUT in their ASR 2020, reporting data for 2019. It is noted that diffusion tubes ID 74 and ID 70 are located along the same road as the application site and report significantly higher values than the reported in the ES Chapter on air quality monitoring – this is also highlighted	<p>Please see para 6.8 of note, prepared by Waterman IE, dated June 2022 (Appendix F).</p> <p>Further comments have since been issued by LBRuT, prepared by AQE Global, dated July 2022.</p> <p>Waterman IE have provided an Air Quality Assessment update in the ES Statement of Conformity at Annex 2 (Appendix G) and a further response document, titled: 'Air Quality Responses', dated August 2022 (Appendix H).</p>	<p>Y – note issued to LBRuT on 29 June 2022.</p> <p>Y- Annex 2 of the ES Statement of Conformity.</p> <p>Y – Air Quality Responses, dated August 2022.</p>
	ii. It is 6 months' data - not annual bias adjusted,	<p>Please see para 6.10 of note, prepared by Waterman IE, dated June 2022 (Appendix F).</p> <p>Further comments have since been issued by LBRuT, prepared by AQE Global, dated July 2022.</p>	<p>Y – note issued to LBRuT on 29 June 2022.</p> <p>Y- Annex 2 of the ES Statement of Conformity.</p>

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		Waterman IE have provided an Air Quality Assessment update in the ES Statement of Conformity at Annex 2 (Appendix G) and a further response document, titled: 'Air Quality Responses', dated August 2022 (Appendix H).	Y – Air Quality Responses, dated August 2022.
	a) It focuses mainly on Chertsey Court,	<p>Please see paras 6.12-6.13 of note, prepared by Waterman IE, dated June 2022 (Appendix F).</p> <p>Further comments have since been issued by LBRuT, prepared by AQE Global, dated July 2022.</p> <p>Waterman IE have provided an Air Quality Assessment update in the ES Statement of Conformity at Annex 2 (Appendix G) and a further response document, titled: 'Air Quality Responses', dated August 2022 (Appendix H).</p>	<p>Y – note issued to LBRuT on 29 June 2022.</p> <p>Y- Annex 2 of the ES Statement of Conformity.</p> <p>Y – Air Quality Responses, dated August 2022.</p>
	b) It lacks accurate location details, and	Please see para 6.15 of note, prepared by Waterman IE, dated June 2022 (Appendix F).	Y – note issued to LBRuT on 29 June 2022.

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		<p>Further comments have since been issued by LBRuT, prepared by AQE Global, dated July 2022.</p> <p>Waterman IE have provided an Air Quality Assessment update in the ES Statement of Conformity at Annex 2 (Appendix G) and a further response document, titled: 'Air Quality Responses', dated August 2022 (Appendix H).</p>	<p>Y- Annex 2 of the ES Statement of Conformity.</p> <p>Y – Air Quality Responses, dated August 2022.</p>
	<p>c) It is pre closure of Hammersmith bridge - not representative of the current and foreseeable future situation of increased/diverted traffic flow adding to roads already over capacity</p>	<p>Please see para 6.17 of note, prepared by Waterman IE, dated June 2022 (Appendix F).</p> <p>Further comments have since been issued by LBRuT, prepared by AQE Global, dated July 2022.</p> <p>Waterman IE have provided an Air Quality Assessment update in the ES Statement of Conformity at Annex 2 (Appendix G) and a further response document, titled: 'Air</p>	<p>Y – note issued to LBRuT on 29 June 2022.</p> <p>Y- Annex 2 of the ES Statement of Conformity.</p> <p>Y – Air Quality Responses, dated August 2022.</p>

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		Quality Responses', dated August 2022 (Appendix H).	
	iii. This means it is less robust than the Council's ratified and bias adjusted annual data for 2019	<p>Please see para 6.19 of note, prepared by Waterman IE, dated June 2022 (Appendix F).</p> <p>Further comments have since been issued by LBRuT, prepared by AQE Global, dated July 2022.</p> <p>Waterman IE have provided an Air Quality Assessment update in the ES Statement of Conformity at Annex 2 (Appendix G) and a further response document, titled: 'Air Quality Responses', dated August 2022 (Appendix H).</p>	<p>Y – note issued to LBRuT on 29 June 2022.</p> <p>Y- Annex 2 of the ES Statement of Conformity.</p> <p>Y – Air Quality Responses, dated August 2022.</p>
	iv. The report refers to 60ug/m3, the hourly target for residential facades - this is incorrect. For facades of residential property, schools, hospitals and care homes, it should be the annual mean of 40ug/m3 – see LLAQM (TG16) (10).	<p>Please see para 6.21 of note, prepared by Waterman IE, dated June 2022 (Appendix F).</p> <p>Further comments have since been issued by LBRuT, prepared by AQE Global, dated July 2022.</p>	<p>Y – note issued to LBRuT on 29 June 2022.</p> <p>Y- Annex 2 of the ES Statement of Conformity.</p>

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		Waterman IE have provided an Air Quality Assessment update in the ES Statement of Conformity at Annex 2 (Appendix G) and a further response document, titled: 'Air Quality Responses', dated August 2022 (Appendix H).	Y – Air Quality Responses, dated August 2022.
	v. Additional lane for a left hand turn on the opposite side of the road, on Lower Richmond Rd, reducing/removing the mini car park and cutting down 2 x mature trees, thereby moving the houses from 137 – 171 closer to the source and removing a useful, mature green buffer against pollution at this very busy junction. These residents are likely to be exposed to increased levels of pollution and the date of compliance is likely to be delayed, which is against London Plan 2021 SI1. "Development proposals should not: lead to further deterioration of existing poor air quality.... or delay the date at which compliance will be achieved in areas that are currently in exceedance of legal limits"	<p>Please see paras 6.23-6.25 of note, prepared by Waterman IE, dated June 2022 (Appendix F).</p> <p>Further comments have since been issued by LBRuT, prepared by AQE Global, dated July 2022.</p> <p>Waterman IE have provided an Air Quality Assessment update in the ES Statement of Conformity at Annex 2 (Appendix G) and a further response document, titled: 'Air Quality Responses', dated August 2022 (Appendix H).</p>	<p>Y – note issued to LBRuT on 29 June 2022.</p> <p>Y- Annex 2 of the ES Statement of Conformity.</p> <p>Y – Air Quality Responses, dated August 2022.</p>

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59	<p>H. Air quality positive observations</p> <p>i. significant additional work is required to agree suitable air quality positive measures - To date, no concrete suitable air quality positive measures have been specifically selected and proposed and negotiations with the LA need to take place to agree and secure a suitable list air quality positive measures with an indication of how much emission reductions are expected to be achieved. It is noted that the air quality measures need to be above and beyond the measures that will be required to make the proposal air quality neutral.</p> <p>ii. the air quality positive statement does not meet the required LA objectives - too vague and generic - The Air Quality Positive Statement should be SMART (Specific, Measurable, Achievable, Realistic, and Timely).</p> <p>iii. LBRUT does not have sufficient information to ascertain either what exact measures are being proposed and where, when, and for how long nor the benefits expected associated with each of them.</p> <p>iv. A way to monitor their efficiency and adjust as and when necessary is also expected.</p>	<p>Please see paras 7.5-7.8 of note, prepared by Waterman IE, dated June 2022 (Appendix F).</p> <p>Further comments have since been issued by LBRuT, prepared by AQE Global, dated July 2022.</p> <p>Waterman IE have provided an Air Quality Assessment update in the ES Statement of Conformity at Annex 2 (Appendix G) and a further response document, titled: 'Air Quality Responses', dated August 2022 (Appendix H).</p>	<p>Y – note issued to LBRuT on 29 June 2022.</p> <p>Y- Annex 2 of the ES Statement of Conformity.</p> <p>Y – Air Quality Responses, dated August 2022.</p>
	<p>v. A roadmap for air quality impacts, mitigation measures and air quality neutral and positive aspects should be reported distinctly for</p> <ul style="list-style-type: none"> <li>• the detailed and the</li> <li>• outline stages of the application. This will enable LBRUT to better ascertain where and when mitigation is required as well as the suitable level of effort to be deployed.</li> </ul>	<p>Please see para 7.10 of note, prepared by Waterman IE, dated June 2022 (Appendix F).</p> <p>Further comments have since been issued by LBRuT, prepared by AQE Global, dated July 2022.</p> <p>Waterman IE have provided an Air Quality Assessment update in the ES Statement of</p>	<p>Y – note issued to LBRuT on 29 June 2022.</p> <p>Y- Annex 2 of the ES Statement of Conformity.</p> <p>Y – Air Quality Responses,</p>

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		Conformity at Annex 2 (Appendix G) and a further response document, titled: 'Air Quality Responses', dated August 2022 (Appendix H).	dated August 2022.
60	<p><b>I. Size/massing:</b></p> <p>i. Current mitigation does not satisfy requirements of London Plan and LBRUT SPD. It needs to go further, either by reducing inputs - capacity/dwellings or reducing outputs – more/better incentives for modal shift/public transport or reduced road emissions.</p> <p>ii. The river should be reconsidered – LBRUT has been in touch with the PLA. If neither are possible damage costs have been calculated.</p>	<p>Please see para 8.2 of note, prepared by Waterman IE, dated June 2022 (Appendix F).</p> <p>Further comments have since been issued by LBRuT, prepared by AQE Global, dated July 2022.</p> <p>Waterman IE have provided an Air Quality Assessment update in the ES Statement of Conformity at Annex 2 (Appendix G) and a further response document, titled: 'Air Quality Responses', dated August 2022 (Appendix H).</p> <p>Please see para 8.4 of note, prepared by Waterman IE, dated June 2022 (Appendix F).</p> <p>Further comments have since been issued by LBRuT,</p>	<p>Y – note issued to LBRuT on 29 June 2022.</p> <p>Y- Annex 2 of the ES Statement of Conformity.</p> <p>Y – Air Quality Responses, dated August 2022.</p> <p>Y – note issued to LBRuT on 29 June 2022.</p> <p>Y- Annex 2 of the ES</p>



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		<p>prepared by AQE Global, dated July 2022.</p> <p>Waterman IE have provided an Air Quality Assessment update in the ES Statement of Conformity at Annex 2 (Appendix G) and a further response document, titled: 'Air Quality Responses', dated August 2022 (Appendix H).</p>	<p>Statement of Conformity.</p> <p>Y – Air Quality Responses, dated August 2022.</p>
61	<p><b>J. Conditions / HOTs (if objections can be overcome):</b></p> <p>a. Car club bays: Must comply with LBRUT's Air Quality SPD s92, and include financial incentives/membership for 2 years.</p>	<p>Please see para 9.2 of note, prepared by Waterman IE, dated June 2022 (Appendix F).</p> <p>Further comments have since been issued by LBRuT, prepared by AQE Global, dated July 2022.</p> <p>Waterman IE have provided an Air Quality Assessment update in the ES Statement of Conformity at Annex 2 (Appendix G) and a further response document, titled: 'Air Quality Responses', dated August 2022 (Appendix H).</p>	<p>Y – note issued to LBRuT on 29 June 2022.</p> <p>Y- Annex 2 of the ES Statement of Conformity.</p> <p>Y – Air Quality Responses, dated August 2022.</p>

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	b. Robust travel and service plans, with measurable, reportable targets, will need careful conditioning.	<p>Please see para 9.4 of note, prepared by Waterman IE, dated June 2022 (Appendix F).</p> <p>Further comments have since been issued by LBRuT, prepared by AQE Global, dated July 2022.</p> <p>Waterman IE have provided an Air Quality Assessment update in the ES Statement of Conformity at Annex 2 (Appendix G) and a further response document, titled: 'Air Quality Responses', dated August 2022 (Appendix H).</p>	<p>Y – note issued to LBRuT on 29 June 2022.</p> <p>Y- Annex 2 of the ES Statement of Conformity.</p> <p>Y – Air Quality Responses, dated August 2022.</p>
	c. Section 106 will be required – see report and maps attached.	<p>Please see para 9.6 of note, prepared by Waterman IE, dated June 2022 (Appendix F).</p> <p>Further comments have since been issued by LBRuT, prepared by AQE Global, dated July 2022.</p> <p>Waterman IE have provided an Air Quality Assessment update in the ES Statement of Conformity at Annex 2</p>	<p>Y – note issued to LBRuT on 29 June 2022.</p> <p>Y- Annex 2 of the ES Statement of Conformity.</p> <p>Y – Air Quality Responses, dated August 2022.</p>

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		(Appendix G) and a further response document, titled: 'Air Quality Responses', dated August 2022 (Appendix H).	
	d. Conditions: <ul style="list-style-type: none"> <li>• Low Emission Strategy</li> <li>• Reducing emissions from demolition and construction</li> </ul>	Please see para 9.8 of note, prepared by Waterman IE, dated June 2022 (Appendix F).  Further comments have since been issued by LBRuT, prepared by AQE Global, dated July 2022.  Waterman IE have provided an Air Quality Assessment update in the ES Statement of Conformity at Annex 2 (Appendix G) and a further response document, titled: 'Air Quality Responses', dated August 2022 (Appendix H).	Y – note issued to LBRuT on 29 June 2022.  Y- Annex 2 of the ES Statement of Conformity.  Y – Air Quality Responses, dated August 2022.
<b>10. Environmental Health – Noise and Odour</b>			
62	<b>Recommend conditions:</b> <ul style="list-style-type: none"> <li>• Rodent activity from dislodged vermin during the commencement of demolition and construction activities.</li> </ul>	Agreed	
63	<ul style="list-style-type: none"> <li>• Noise impact from demolition and construction activity upon residents in the vicinity of the development</li> </ul>	Please see para 1.4 of 'Briefing Note –Response to Consultee Comments on Noise', prepared	

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		by Waterman IE, dated 29 July 2022 (Appendix I).	
64	<ul style="list-style-type: none"> <li>Noise impact from external transportation noise sources such as rail, aircraft and road traffic on the proposed residential development (noise protection residential / Noise Protection from internal transmission)</li> </ul>	Please see paras 1.5-1.6 of 'Briefing Note –Response to Consultee Comments on Noise', prepared by Waterman IE, dated 29 July 2022 (Appendix I).	
65	<ul style="list-style-type: none"> <li>Noise from mechanical services plant including heating, ventilation and air conditioning (HVAC) and kitchen extraction serving the proposed development affecting existing residential properties in the vicinity of the proposed development</li> </ul>	Please see para 1.7 of 'Briefing Note –Response to Consultee Comments on Noise', prepared by Waterman IE, dated 29 July 2022 (Appendix I).	
66	<ul style="list-style-type: none"> <li>Impact from odour from use of kitchen extraction equipment</li> </ul>	Acceptable, subject to suitable condition wording.	
67	<ul style="list-style-type: none"> <li>Dust emissions from demolition and construction activities impacting upon residential properties in the vicinity</li> </ul>	Agreed, subject to suitable condition wording.	
68	<ul style="list-style-type: none"> <li>Potential noise breakout from inadvertently leaving emergency doors open namely for the proposed cinema</li> </ul>	Please see para 1.8 of 'Briefing Note –Response to Consultee Comments on Noise', prepared by Waterman IE, dated 29 July 2022 (Appendix I).	
<b>11. Environmental Health – Contaminated Land</b>			
69	Recommend conditions	Suggested wording to be provided for review.	N
<b>12. Highways</b>			
70	A full assessment of the planning applications is not possible due to concerns and errors within the Transport Assessment as described below. These should	Details provided below of Stantec response.	

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	be addressed by the applicant and/or peer reviewed to enable further assessment.		
71	<p>Previously,</p> <ul style="list-style-type: none"> <li>o Council expressed concern regarding the absence of commitment to transport mitigation.</li> <li>o Council challenged a change in the trip generation methodology which resulted in relatively small increases in the total number of trips predicted to be generated despite the scale of the increase in the quantum of development.</li> <li>o number of trips in the morning peak period would increase from 2,391 to 2,410,</li> <li>o number of trips in the afternoon peak period would increase from 1,862 to 1,938.</li> </ul>	<p>There is significant investment from the applicant to mitigate the impact of the development on the surrounding highway network. In total the investment on Transport improvements, through s278 works and contributions to TfL / LBRuT is over £16.5 million.</p> <p>The trip generation methodology change is directly related to the school trip generation. Further details are provided in the response to Comment A below.</p>	
72	<p>There are serious concerns about the robustness of this data.</p> <ul style="list-style-type: none"> <li>o the way that the predicted school trips have changed between 2020 and 2022 despite there being no material change to the proposed school. The submission puts this down to:</li> <li>o greater emphasis on sustainable travel</li> <li>o adjustment to the trip generation methodology in the light of data from other schools</li> </ul>	Further details are provided in the response to Comment A below.	
73	<p>However,</p> <ul style="list-style-type: none"> <li>o this does not explain the reduction in total trips with fewer students also predicted to travel to school on foot, by bike and using public transport.</li> </ul>	Further details are provided in the response to Comment A below.	

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	<ul style="list-style-type: none"> <li>o For a school of 1,200 students and 60 staff (and assuming also ancillary trips and some parents driving their children to school), officers are not persuaded that there would be only 985 total arrivals in the hour prior to the school starting, with net arrivals being 723.</li> <li>o This is supported by data collected for other schools to get estimates of how many pupils arrive/depart within an hour of the school start and end times in the light of the Stag application appearing to showing only about 800 of 1,200+ students and staff arriving.</li> <li>o 100% pupils arrived within the hour before school starts -most only allowed pupils on site up to 45 minutes before.</li> <li>o 80-100% left within the hour after school finished because most clubs were only an hour. It was only Sports fixtures or perhaps Yr 13 study groups that perhaps stay later. The suggested 80% is likely to be closer to 90%.</li> </ul>		
74	<p>A. Evidence is required to justify the reduction in total school trips. What appears to be only a relatively modest increase in trips between the 2020 and 2022 schemes depends on this large reduction in school trips offsetting the increase in trips from the larger whole development.</p>	<p>Stantec: "Evidence is provided within the TA to justify the change in trips generated by the school. The results are based on published trip rates using the same methodology as previously agreed with the LBRuT Resolved Position (2020). The only difference is one of the sites (Southgate) that was used in the assessment has been omitted.</p> <p>Notably Southgate school, which was used in the assessment previously has a significantly higher peak hour</p>	

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		<p>person trip rate and is not comparable with the other schools. This school was taken from TRAVL data and there is limited information for how the trip rate was derived. Closer analysis of the data shows that with 1,600 students and 141 teachers, with 0.474 leaving the site nearly 800 students would have their parents dropping them to school which is not reflective of a secondary school and how the school at Mortlake would operate.</p> <p>Notably all of the agreed TRICS sites are showing an arrival trip rate between 0.77 and 0.821, where we have used 0.819 in the AM peak hour. Therefore, the numbers are in line with other schools where detailed surveys have been undertaken.</p> <p>The data provided in the consultation response suggesting 100% of pupils arrive in peak hour, it is</p>	

Row No.	LBRuT Comment (27 May 2022)	Applicant Response (18 August 2022)	Revised information submitted (Y/N)
		<p>unclear where this data has come from and whether it is based on full multi-modal surveys or is just an opinion.</p> <p>Notably it was agreed with TfL that Southgate School should be discounted and the average of the other 5 schools has been used for the assessment. In addition, this was discussed with LBRuT during pre-app discussions and it was agreed in principle that Southgate was not reflective and comparable with the other schools.”</p>	
75	B. Why the trip generation for the cinema is different from 2020?	Cinema has reduced in size from 2,120 m2 to 1,606m2.	
76	C. The TA in numerous places notes the PTAL of the site and often caveats this with the location is more accessible than the PTAL implies. The PTAL is the PTAL. In numerous places, the TA says that there are 4 trains per hour from Mortlake to London Waterloo (via Putney) all day. This is not the case. Since the pandemic, there are only 2 trains per hour off-peak. Moreover, South Western Railway has proposed that this reduction to 2 trains per hour is made permanent in December 2022. Predictions of rail usage and statements about the PTAL need to be reassessed.	Stantec: “Noted, the TA has assumed that train services would return to 4 per hr once the demand rises on the trains. Patronage data used in the assessment is based on pre-Covid conditions when trains were significantly busier, which was considered a robust way to study the impact as it would demonstrate a worst-case assessment.	



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		<p>However, to be robust a new assessment has been undertaken with two trains per hour and updated patronage data provided by Network Rail. Full details are included on TN045 - Rail Impact Assessment for Mortlake Station (Appendix K).</p> <p>The updated rail assessment indicates that there is sufficient capacity for forecasted future passenger numbers in terms of station infrastructure and train capacity in 2022. Patronage data shows 77% decrease in train users at Mortlake station the reduction of train services to two per hour shows that the trains are still operating with more spare capacity than pre-covid.</p> <p>PTAL would be improved with the permeability of the site. In addition, it was agreed with TfL as part of the original application that the rating in</p>	

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		<p>the northwest corner is incorrect as it ignores the bus services that operate along Clifford Avenue. A bespoke PTAL assessment has been undertaken for the site and full details are included on TN047 - Stag Brewery PTAL Technical Note - Rev A (Appendix L).</p> <p>The assessment concludes that the PTAL score across the Site is in reality higher than the existing rating. The existing PTAL ratings show the site is predominantly 1a and 2 whereas the results of the updated assessment using PTAL published guidance shows the Site is largely PTAL 2 with some pockets of 3."</p>	
77	<p>D. Questions are raised over the robustness of using data dating back to 2016 and 2017, given its age, impact of COVID and closure of Hammersmith Bridge. The TA states that TfL are satisfied with the traffic assessment. Confirmation is sought from TfL.</p>	<p>Stantec: "New traffic surveys have been undertaken at the junctions of Chalker's Corner, Great Chertsey Road / Dan Mason Drive / Hartington Road, Upper Richmond Road / Clifford Avenue and Lower Richmond Road / Mortlake High Street to compare with</p>	

Row No.	LBRuT Comment (27 May 2022)	Applicant Response (18 August 2022)	Revised information submitted (Y/N)
		<p>the 2016 / 2017 data used in the assessment. Full details are included in TN048 – Traffic Data Comparison (Appendix M).</p> <p>The results have concluded that there is a general decrease in peak hour traffic (0800-0900 and 1700 – 1800) from 2016/17 to 2022, which is the assessment times based on when the development generates the highest trips on the surrounding network. This is due to more people now working from home and travelling outside of peak hours.</p> <p>It is therefore considered that the previous modelling work should still be considered satisfactory and robust and the mitigation at Chalkers Corner is sufficient to mitigate the impact of the development, as it was based on higher baseline traffic data. No further junction modelling is therefore proposed at this time. In</p>	

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		addition, it is noted, that prior to implementation of the Chalkers Corner scheme as part of the Traffic Management Act 2004 Notification (TMAN), the study area will be re-modelled with VISSIM and follow TfL's VMAP process using updated traffic surveys at the time the application is raised."	
78	E. If concerns over the robustness of the TA are satisfied, the Chalker's Corner light scheme is predicted to mitigate much of the traffic impact. The s106 would need to ensure the timely delivery of the Chalker's Corner scheme. TfL will need to commit to such delivery.	Noted	
79	F. Remain concerned over the ability of ensuring the proposal model split is achieved.	Modal shift targets are to be monitored through the Travel Plans. These will have targets that the applicant will have to meet, otherwise increased measures will need to be introduced	
<b>13. Lead Local Flood Authority</b>			
80	Current recommendation – refusal - The drainage hierarchy section requires more information and the runoff rate section fails.	See responses below, provided by Waterman IE.	
81	A. Drainage hierarchy: i. MORE INFORMATION REQUIRED – the green roof and water butts should be shown on the drainage drawing.	See paragraphs 2.2-2.4 of the Drainage and Flooding response note, prepared by Waterman IE, dated August 2022 (Appendix N).	

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	<p>B. Runoff rate: ii. FAIL – The proposed runoff rate of 249l/s is much higher than the greenfield runoff rate of 44.1l/s. Consideration should be made to additional attenuation features such as blue roofs to reduce the proposed runoff rate. The site area used to calculate the 100 year greenfield runoff rate of 44.1l/s should be confirmed. iii. MORE INFORMATION REQUIRED – the existing (brownfield) runoff rate needs to be supplied for 1 in 1 year event and a 1 in 30 year event. All runoff rates should be presented in the SuDS proforma. iv. The applicant has submitted information which has not sufficiently addressed policy relating to London Plan Policy SI 13. Until the above points are addressed, matters relating to volume control, Non-Statutory Technical Standards for SuDS S7-S9 and future maintenance have not been assessed due to their reliance on suitable proposals for sustainable drainage features and runoff rate restrictions.</p>	<p>See paragraphs 2.6, 2.8, &amp; 2.10-2.15 of the Drainage and Flooding response note, prepared by Waterman IE, dated August 2022 (Appendix N).</p>	
<b>CIL Summary (Albeit with caveats with this estimate)</b>			
82	<p>A. Provide a clearer phasing plan that could be used as an approved plan</p> <ul style="list-style-type: none"> <li>o The estimates have not been split into individual phases because the phasing plan in the CMS relates to both the outline and detailed elements so it was difficult to work out what each phase actually entails - for CIL, have to treat the outline and detailed elements separately.</li> <li>o The area 2 basement doesn't seem to appear in the phasing plan at all, and the area 1 basement, in addition to being split in 3 parts in the phasing plan, making it difficult to calculate each phase, part of the basement seems to be commencing within 3 different phases, so wasn't sure which phase it was actually commencing in.</li> <li>o Demolition is also not specified in any phase.</li> </ul>	<p>As financial viability appraisal is reaching a finalised state, the applicant will know the number of units to be provided and where in the masterplan they will be located. This will enable the applicant to confirm a delivery / phasing plan. This will be discussed with LBRuT officers as part of the s106 discussions.</p>	
83	<p>B. Actual amount of CIL can only be confirmed once all relevant details are approved and any relief claimed.</p>	Noted	
84	<p>C. Lawful use:</p> <ul style="list-style-type: none"> <li>i. not given any demolitions credit, as none of the buildings have been in lawful use for at least 6 months in the previous 3 years.</li> </ul>	Noted	

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	ii. Clause in S106 to revisit viability assessment in the event that a lawful use is established, as this would materially affect the amount of CIL payable and the delivery of affordable housing.																				
85	<p>D. Estimates</p> <p><b>Detailed Element</b></p> <table border="1"> <thead> <tr> <th>Community Infrastructure Levy (CIL) estimate</th> <th>Without Social Housing Relief</th> <th>With Social Housing relief</th> </tr> </thead> <tbody> <tr> <td>Mayoral CIL</td> <td>£7,928,707.30</td> <td>£7,651,565.77</td> </tr> <tr> <td>Borough CIL</td> <td>£28,773,530.13</td> <td>£27,577,705.03</td> </tr> </tbody> </table> <p><b>Outline Element</b></p> <table border="1"> <thead> <tr> <th>Community Infrastructure Levy (CIL) estimate</th> <th>Without Social Housing Relief</th> <th>With Social Housing relief</th> </tr> </thead> <tbody> <tr> <td>Mayoral CIL</td> <td>£4,568,802.91</td> <td>£2,738,657.94</td> </tr> <tr> <td>Borough CIL</td> <td>£19,713,715.48</td> <td>£11,816,907.95</td> </tr> </tbody> </table>	Community Infrastructure Levy (CIL) estimate	Without Social Housing Relief	With Social Housing relief	Mayoral CIL	£7,928,707.30	£7,651,565.77	Borough CIL	£28,773,530.13	£27,577,705.03	Community Infrastructure Levy (CIL) estimate	Without Social Housing Relief	With Social Housing relief	Mayoral CIL	£4,568,802.91	£2,738,657.94	Borough CIL	£19,713,715.48	£11,816,907.95	Noted. Final CIL estimates to be based on the final area schedule (Rev J, dated 13 July 2022) submitted with these substitutions. Updated CIL forms (Application A only) have also been prepared and submitted, dated 13 July 2022.	Y – updated CIL forms.
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<b>External Consultee responses</b>																					
86	<p>Consultees where no response has been received as yet:</p> <ul style="list-style-type: none"> <li>• Greater London Authority</li> <li>• Transport for London (This will form part of GLA Stage 1)</li> <li>• London Borough of Wandsworth</li> <li>• London borough of Hammersmith and Fulham</li> <li>• South Western Trains</li> <li>• Network Rail.</li> </ul>	GLA, TfL and Network Rail responses now all received.																			
87	<p>No objections raised from the following consultees (subject to conditions):</p> <ul style="list-style-type: none"> <li>• Historic England (Archeology)</li> <li>• Natural England</li> <li>• Achieving for Children</li> </ul>	Suggested condition wording to be proposed for applicant review.																			
88	<p>Consultees not wishing to comment</p> <ul style="list-style-type: none"> <li>• Historic England (Planning)</li> <li>• Secretary of State / National Planning Casework Unit</li> </ul>																				
89	<p>1. London Borough of Hounslow –</p> <ul style="list-style-type: none"> <li>• Request improvements to 195 bus route, which links the site to Chiswick</li> </ul>	Stantec response: TfL have requested a sum of £3.2																			

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		million from the applicant towards improving bus services in the vicinity of the site. This will include increasing bus services and provide money towards improving routes. This is considered sufficient to mitigate the impacts of the increased bus passengers from the development.	
90	<p><b>2. Environment Agency</b></p> <p>A. Holding objection until further clarification is received. It is unclear whether the proposed flood defence wall will provide a continuous, fit for purpose flood defence line and how the proposal differs from the wall configuration agreed between the EA and the applicant under previous application reference 18/0547/FUL.</p> <p>B. Further information required to provide certainty that the proposed development will be safe for its lifetime from flooding in line with Paragraphs 159 and 164 of the NPPF, and Policy LP 21 of the Richmond Local Plan (2018)</p> <p>C. Thames Tidal Flood Defences - Contradictory information has been submitted with regards to the flood defence. For example, Appendix 12.5: Flood Defence Wall Summary Note [Doc Ref: WIE1871-104-BN-3-1-2-RiverWall] by Waterman Infrastructure &amp; Environment Limited dated 22 February 2022 includes two drawings outlining different proposed locations for the final flood defence line. The drawing numbers are:</p> <ul style="list-style-type: none"> <li>▪ 1006 Rev A07 by Waterman Infrastructure &amp; Environment Limited dated July 2017.</li> <li>▪ 38262/5520/09 by Stantec dated 18 January 2022.</li> </ul> <p>D. Overcoming EA Objection</p>	<p>Stantec drawings 38262/5520/09 and 38262/5520/23 have been updated to match the current line of the flood defense wall.</p> <p>The River Wall Note, (ES Appendix 12.5), has been updated.</p>	<p>Y – Stantec updated drawings</p> <p>Y - The River Wall Note, (ES Appendix 12.5), has been updated.</p>

Row No.	LBRuT Comment (27 May 2022)	Applicant Response (18 August 2022)	Revised information submitted (Y/N)
	<p>i. provide further clarification as to which drawings of the flood defence line are to be incorporated into the final design.</p> <p>ii. Any drawings of flood defence line configurations not being incorporated into the final design should be withdrawn from the submitted information or amended to show the proposed configuration.</p> <p>iii. Confirmation that the configuration of the flood defence line will be as agreed previously should also be provided.</p> <p>iv. Provide all drawings of the Thames Tidal flood defence are included within Appendix 12.5.</p> <p>v. There has been significant correspondence between EA and the applicant since 2016 regarding the configuration of the flood defence wall in any new development at this site. We would welcome an opportunity to discuss the contents of this letter in greater detail.</p>		
91	<p><b>3. Thames Water</b></p> <p><b>a) Waste Comments:</b> unable to determine the Foul water infrastructure needs of this application. Thames Water has contacted the developer in an attempt to obtain this information and agree a position for FOUL WATER drainage, but have been unable to do so in the time available.</p> <p><b>b) Water Comments:</b> Thames Water has identified an inability of the existing water network infrastructure to accommodate the needs of this development proposal. Thames Water have contacted the developer in an attempt to agree a position on water networks but have been unable to do so in the time available.</p>	<p>The Foul Water and Utilities Assessment issued as part of the application provided correspondence from Thames Water confirming that there was sufficient capacity in the sewage systems to serve the development (p. 46).</p> <p>The Foul Water and Utilities Assessment issued as part of the application provided correspondence from Thames Water outlining a budget quotation for the various supplies required and that this would need to be followed up with further investigations to</p>	N



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		allow Thames Water to assess the requirements for supplying the site (p. 28). This would follow as part of the next design stages and on the basis of the construction phasing etc. The investigations were not undertaken as part of the previous applications.	
92	<p><b>c) Supplementary Comments Regarding foul water:</b></p> <p>i. confirm the foul water manhole reference numbers which the development proposes to connect into.</p> <p>ii. confirm which areas of the development will drain to each of those connection points to the public foul sewer system. This is so Thames Water can calculate the impact of the additional foul flows on the local foul sewer system.</p> <p>iii. specify either the anticipated flow rate through each proposed foul water manhole, or the number and type of buildings (e.g. 300 dwellings, 500m2 of offices).</p> <p>iv. Regarding Surface Water, the site plans state that some surface water currently enters the foul sewer system and that this will be removed. Confirm what flow rate will be removed, and from which section of the foul sewer.</p> <p>v. demonstrate what measures will be undertaken to minimise groundwater discharges into the public sewer.</p> <p>vi. Agree to the following, that would be secured via conditions:</p> <ul style="list-style-type: none"> <li>• incorporate within proposal, protection to the property to prevent sewage flooding, by installing a positive pumped device (or equivalent reflecting technological advances), on the assumption that the sewerage network may surcharge to ground level during storm conditions.</li> </ul>	<p>i.-iv. See paragraph 4.13 of the Drainage and Flooding response note, prepared by Waterman IE, dated August 2022 (Appendix N).</p> <p>V. See paragraph 4.10-4.11 of the Drainage and Flooding response note, prepared by Waterman IE, dated August 2022 (Appendix N).</p> <p>vi. Noted, see paragraph 4.13 of the Drainage and Flooding response note, prepared by Waterman IE, dated August 2022 (Appendix N).</p>	

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	<ul style="list-style-type: none"><li>• There are public sewers crossing or close to your development. Require condition regarding piling method statement</li></ul>		

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93	<p><b>4. Port of London</b></p> <p>B. Notice has not been served on the PLA – within the red line of their ownership</p> <p>C. Interaction with the River</p> <p>i. The location of the boathouse is disappointing. With a review of the proposed development there might have been the opportunity to enhance the river related offering as part of this development and relocate the boathouse to the western side of the site.</p> <ul style="list-style-type: none"> <li>o At low tide there is no water and therefore it would not be possible to provide full tidal access for the rowing club to the river.</li> <li>o The drawdock is also susceptible to flooding at high waters, which could again cause access limitations</li> <li>o The applicant should explain the reasonings for the river related facilities remaining in building 9 and should provide all the necessary supporting documents if the boat house is to remain within building 9, including the swept paths that were previously undertaken</li> </ul> <p>D. Towpath Works / S106</p> <p>ii. Discussions on license for works on towpath will need re-visiting and concluding</p> <p>iii. incorporate suicide prevention measures.</p> <p>iv. Refer to <a href="https://www.pla.co.uk/assets/asaferriversidev15.pdf">https://www.pla.co.uk/assets/asaferriversidev15.pdf</a></p> <p>E. Use of the River During Construction - PLA does agree to the carrying out of a River Transport Feasibility Study and it is recommended that this is secured through a condition.</p> <p>F. External Lighting – recommend condition</p> <p>G. River Works Licence</p>	<p>Part B. The PLA are not registered landowners for the site.</p> <p>Part C: please see email from the Fulham Reach Boat Club, dated 17 June 2022 (Appendix O).</p> <p>Part C: Squires have provided the following response:  “Location was acceptable previously and provides a focus and community use for this end of the masterplan, drawing people along the new High Street, instead of bunching around the Maltings. The amendments to gain access to the Maltings would be extensive to the BTM and would not provide easy access for a boat club. Access at low tide is similar to other points along the site edge. We have included swept paths as previously on drawings.”</p>	

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		<p>Part D: to be discussed as part of the s106 agreement discussions.</p> <p>Part E: noted</p> <p>Part F: suggested wording to be provided.</p> <p>Part G: A consultation exercise with the MMO is ongoing, led by Waterman IE, separate to the planning process.</p>	

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94	<p><b>5. Marine Management Organisation</b></p> <p>A. Works below mean high water mark may require a Marine License</p> <p>B. A wildlife licence is required for activities that would affect a UK / European protected marine species.</p> <p>C. Environmental Impact Assessment - If this consultation elates to a project capable of falling within either set of EIA regulations, then it is advised that the applicant submit a request directly to the MMO to ensure any requirements under the MWR are considered adequately at the following link</p> <p>D. Marine Planning - Under the Marine and Coastal Access Act 2009 ch.4, 58, public authorities must make decisions in accordance with marine policy documents and if it takes a decision that is against these policies it must state its reasons.</p>	A consultation exercise with the MMO is ongoing, led by Waterman IE, separate to the planning process.	
95	<p><b>6. Metropolitan Police</b></p> <p>A. Conditions - Secured by Design and evidence of such accreditation.</p> <p>B. Request for discussions on:</p> <ul style="list-style-type: none"> <li>• Permeability</li> <li>• CCTV</li> <li>• Lighting</li> <li>• Security for flats / communal entrances</li> <li>• Gates, storage and outbuildings</li> </ul>	<p>A – Noted</p> <p>B – all these items have been discussed previously with the Met during the refused GLA application, but we will continue discussions.</p>	
96	<p><b>7. Health and Safety Executive / Gateway One - Concerns / objections to:</b></p> <p>A. Means of escape and fire service access</p> <p>B. Single staircases to basement lift to basement</p> <p>C. Refuse area in basement</p> <p>D. Lack of detail on wheelchair user refuse and contradictions between planning statement and fire statement.</p> <p>E. Recommendations of conditions for outline section and need for re-consultation with the HSE</p> <p>F. Recommendation the applicant uses the fire statement form from gov.uk.</p> <p>G. Further advice as outlined in HSE response.</p>	See full HSE response, dated 27 July 2022, prepared by Hoare Lea.	Y

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97	<p>8. Sport England A. No objection, subject to the requirements and conditions set out in application 22/0902/FUL being satisfied, including clauses within the Section 106</p> <ul style="list-style-type: none"> <li>• ensure the school sports facilities will be delivered ahead of (or alongside) the development of housing on the site.</li> <li>• Phasing</li> <li>• if it is decided not to proceed with the secondary school that provides a community sports hall, alternative proposals may be required to meet the sporting needs for indoor sports facilities arising from the Stag Brewery site either within amended proposals on the site or a contribution to off-site provision.</li> </ul> <p>B. Sport England would also like to draw the applicants' attention to its Active Design guidance. <a href="https://www.sportengland.org/facilities-planning/active-design/">https://www.sportengland.org/facilities-planning/active-design/</a>. Much of this detail will need to be addressed at the reserved matters stage]</p>	Noted	
98	<p><b>9. CCG</b></p> <p>The submitted Environmental Statement (March 2022) assesses the impact on primary care (GP) infrastructure. It identifies two GP practices within 1km of site - Richmond Medical Group and Johnson and Partners who are both located in Sheen Lane Health Centre. It states, at paragraph 7.62, that both surgeries are accepting new patients indicating there may be spare capacity. This is an incorrect assumption as closing a practice list to new registrations is a decision taken by CCG in exceptional circumstances often because of contractual issues.</p> <p>The two GP practices are part of Sheen and Barnes Partners Primary Care Network (PCN). This also includes two other practices – Essex House and Glebe Road Surgery and cover a population of 52,230 registered patients. The PCN is providing a wider range of services using an increasingly multi-</p>	<p>Hatch have provided the following comments:</p> <p>“We reiterate that according to the evidence reviewed for the purposes of the socio-economic assessment, the two GP’s in closest proximity to the Site have a ratio of registered patients per FTE GP which falls below the HUDU benchmark of 1,800. Further, the socio-economics assessment found</p>	

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	<p>disciplinary workforce. This has placed further pressure on workforce and estate capacity. PCN development work is currently underway in Richmond Borough and as such there may be further hub service requirements. The two GP Practices in Sheen Lane Health Centre do not have the capacity to absorb the additional demand generated by the proposed development. Consideration will need to be given to the configuration of the current building and digital solutions to manage access for an increased number of patients. This will require capital investment.</p> <p>The Environmental Statement concludes that the demand generated by up to 2,472 additional residents will have an adverse impact on primary healthcare (paragraph 7.124) and that a s106 contribution should be secured to mitigate the impact (paragraph 7.149 and Table 7.23).</p> <p>The Council's Planning Obligations Supplementary Planning Document (June 2020) supports the use of the HUDU Planning Contributions Model (HUDU Model) to assess the impact of development on healthcare infrastructure and calculate developer contributions (paragraph 6.78).</p> <p>Based on the indicative dwelling mix in Table 3.0 of the Community Uses and Cultural Strategy (March 2022), the HUDU Model calculates a s106 requirement of £583,260 which is required to mitigate the impact of the development.</p> <p>Whilst the Environmental Statement focuses on primary healthcare, a Community Uses and Cultural Strategy (March 2022) also considers 'intermediate' healthcare and acute (secondary) healthcare provided in hospitals. Table 2.8 lists Health Centres in the surrounding area, which accommodate community services provided by Hounslow and Richmond Community Healthcare NHS Trust and South West London and St George's Mental Health NHS Trust. Table 3.6 suggests that mitigation in the form of a s106 financial contribution may be required to off-set the potential pressures faced by providers in accommodating the additional demand generated by the development.</p>	<p>that the ratio of patients per FTE GP would remain below the HUDU benchmark when the total population yield from the proposed development is added to the current number of registered patients. This suggests there is capacity to absorb additional demand in local GP facilities which is contrary to LBRuT's comments."</p>	

Row No.	LBRuT Comment (27 May 2022)	Applicant Response (18 August 2022)	Revised information submitted (Y/N)
	<p>The significant increase in demand will have an impact on Hounslow and Richmond Community Healthcare NHS Trust (HRCH) community health services, such as district nursing, health visiting, urgent treatment centre and physio plus a new school resulting in school nurses and immunisations teams seeing an expected increase in patients. Therefore, we have to assume that there will be a significant increase across both adult and children's services, which while difficult to determine exactly which services will be impacted it is inevitable that HRCH will see an increase in demand. A number of community health services are already provided from Centre House, Sheen Lane, including, but not limited to MSK Physiotherapy, District Nursing, Richmond Response &amp; Reablement Team (RRRT), Children's Immunisation, Podiatry Service, Falls Clinic.</p> <p>HRCH provides rehabilitation inpatient (intermediate) beds at Teddington Memorial Hospital. The HUDU model does include intermediate care and the development is likely to have an impact on this service. The additional cost would be £37,725.</p> <p>Therefore, it is felt that the developer has a responsibility to contribute towards such an increase in healthcare costs, with the total being £620,985. Whilst the normal approach is to pay a contribution prior to occupation of the residential units, to ensure that investment in healthcare is delivered in a timely manner, the trigger point would be based on the commencement of development.</p>		



**Application B (ref: 22/0902/FUL)**

LBRuT Comment (27 May 2022)	Applicant Response (18 August 2022)	Revised information submitted (Y/N)
<b>Policy – Flooding, playing field, OOLTI, education</b>		
A. Community Use Agreement as those previously discussed.	Agreed	
<b>Urban Design and conservation</b>		
<p>A. Building:</p> <p>i. Need clarity on the green screen to the left of the main school entrance.</p> <p>ii. Need greater detail to assess important details such as window reveals.</p> <p>iii. Need greater detail on the appearance of the roof and roof screen</p>	All to be dealt with via a suitably worded planning condition	
B. MUGA and associated sports facilities: it is not entirely clear what these will look like. Further detail required to allow robust assessment	Can be dealt with via a suitably worded planning condition	
<p>C. Open space:</p> <p>i. Additional street tree planting in the surrounding area would be beneficial.</p>	Please can officers confirm which area this is referring to?	
ii. Green roofs / walls should be used to help mitigate the loss, together with additional tree and other planting.	<p>See indicative drawing ref: C645_Z3_E_AL_002 (Appendix J), which sets out where green walls could be located. Final details could be subject to a suitably worded planning condition.</p> <p>A ‘potential area to be provided as green roof’ is shown on the submitted roof plan (ref: 18125 C645_Z3_P_RF_001 Rev B).</p>	Y – see Appendix J.
<p>D. Boundary treatments</p> <p>i. The treatment of the MUGA and any school boundary treatment will have an impact on the sense</p>	Information on the MUGA enclosures is given on p23 of the School Landscape DAS.	

LBRuT Comment (27 May 2022)	Applicant Response (18 August 2022)	Revised information submitted (Y/N)
of openness and character here. Need further detail / conditioned		
E. Conditions: v. Materials, window reveals, roof boundary treatment & plant, hard & soft landscape, boundary treatment.	Noted and agreed	
<b>3. Highways</b>		
A full assessment of the planning applications is not possible due to concerns and errors within the Transport Assessment as described below. These should be addressed by the applicant and/or peer reviewed to enable further assessment.	Details of Stantec response provided below.	
<p>Previously,</p> <ul style="list-style-type: none"> <li>o Council expressed concern regarding the absence of commitment to transport mitigation.</li> <li>o Council challenged a change in the trip generation methodology which resulted in relatively small increases in the total number of trips predicted to be generated despite the scale of the increase in the quantum of development.</li> <li>o number of trips in the morning peak period would increase from 2,391 to 2,410,</li> <li>o number of trips in the afternoon peak period would increase from 1,862 to 1,938.</li> </ul>	<p>There is significant investment from the applicant to mitigate the impact of the development on the surrounding highway network. In total the investment on Transport improvements, through s278 works and contributions to TfL / LBRuT is over £16.5 million.</p> <p>The trip generation methodology change is directly related to the school trip generation. Further details are provided in the response to Comment A below.</p>	
<p>There are serious concerns about the robustness of this data.</p> <ul style="list-style-type: none"> <li>o the way that the predicted school trips have changed between 2020 and 2022 despite there being no material change to the proposed school. The submission puts this down to:</li> </ul>	Further details are provided in the response to Comment A below.	

<b>LBRuT Comment (27 May 2022)</b>	<b>Applicant Response (18 August 2022)</b>	<b>Revised information submitted (Y/N)</b>
<ul style="list-style-type: none"> <li>o greater emphasis on sustainable travel</li> <li>o adjustment to the trip generation methodology in the light of data from other schools</li> </ul> <p>However,</p> <ul style="list-style-type: none"> <li>o this does not explain the reduction in total trips with fewer students also predicted to travel to school on foot, by bike and using public transport.</li> <li>o For a school of 1,200 students and 60 staff (and assuming also ancillary trips and some parents driving their children to school), officers are not persuaded that there would be only 985 total arrivals in the hour prior to the school starting, with net arrivals being 723.</li> <li>o This is supported by data collected for other schools to get estimates of how many pupils arrive/depart within an hour of the school start and end times in the light of the Stag application appearing to showing only about 800 of 1,200+ students and staff arriving.</li> <li>o 100% pupils arrived within the hour before school starts -most only allowed pupils on site up to 45 minutes before.</li> <li>o 80-100% left within the hour after school finished because most clubs were only an hour. It was only Sports fixtures or perhaps Yr 13 study groups that perhaps stay later. The suggested 80% is likely to be closer to 90%.</li> </ul>		
<p>A. Evidence is required to justify the reduction in total school trips. What appears to be only a relatively modest increase in trips between the 2020 and 2022</p>	<p>Stantec: Evidence is provided within the TA to justify the change in trips generated by the school. The results are based on published trip rates using the same methodology as previously agreed with the</p>	

<b>LBRuT Comment (27 May 2022)</b>	<b>Applicant Response (18 August 2022)</b>	<b>Revised information submitted (Y/N)</b>
<p>schemes depends on this large reduction in school trips offsetting the increase in trips from the larger whole development.</p>	<p>LBRuT Resolved Position (2020). The only difference is one of the sites (Southgate) that was used in the assessment has been omitted.</p> <p>Notably Southgate school, which was used in the assessment previously has a significantly higher peak hour person trip rate and is not comparable with the other schools. This school was originally surveyed in TRAVL in 2002 and there is limited information for how the trip rate was derived. Closer analysis of the data shows that with 1,600 students and 141 teachers, with an AM peak hour (08:00 - 09:00) departure rate of 0.474 leaving the school, this equates to nearly 800 parents leaving. Having 50% of secondary students being dropped off to school by their parents is not reflective of a secondary school and how the school at Mortlake would operate. This site has therefore been omitted.</p> <p>Notably all of the agreed TRICS sites (excluding TRAVL sites) are showing an arrival trip rate between 0.77 and 0.821. We have used the average calculated arrival trip rate of 0.819 (including TRICS and TRAVL school sites) in the AM peak hour, which is notably in line with other schools where detailed surveys have been undertaken.</p> <p>The data provided in the consultation response suggesting 100% of pupils arrive in peak hour, it is unclear where this data has come from and whether it is based on full multi-modal surveys or is just an opinion.</p> <p>Notably it was agreed with TfL that Southgate School should be discounted and the average of the remaining 5 schools has been used for the assessment. In addition, this was discussed with LBRuT during</p>	

LBRuT Comment (27 May 2022)	Applicant Response (18 August 2022)	Revised information submitted (Y/N)
	pre-app discussions, and it was agreed in principle that Southgate was not reflective and comparable with the other schools.	
B. Why the trip generation for the cinema is different from 2020?	Cinema has reduced in size from 2,120 m2 to 1,606m2.	
C. The TA in numerous places notes the PTAL of the site and often caveats this with the location is more accessible than the PTAL implies. The PTAL is the PTAL. In numerous places, the TA says that there are 4 trains per hour from Mortlake to London Waterloo (via Putney) all day. This is not the case. Since the pandemic, there are only 2 trains per hour off-peak. Moreover, South Western Railway has proposed that this reduction to 2 trains per hour is made permanent in December 2022. Predictions of rail usage and statements about the PTAL need to be reassessed.	<p>Noted, the TA has assumed that train services would return to 4 per hr once the demand rises on the trains. Patronage data used in the assessment is based on pre-Covid conditions when trains were significantly busier, which was considered a robust way to study the impact as it would demonstrate a worst-case assessment. However, to be robust a new assessment has been undertaken with two trains per hour and updated patronage data provided by Network Rail. Full details are included on TN045 - Rail Impact Assessment for Mortlake Station (Appendix K).</p> <p>The updated rail assessment indicates that there is sufficient capacity for forecasted future passenger numbers in terms of station infrastructure and train capacity in 2022. Patronage data shows 77% decrease in train users at Mortlake station the reduction of train services to two per hour shows that the trains are still operating with more spare capacity than pre-covid.</p> <p>PTAL would be improved with the permeability of the site. In addition, it was agreed with TfL as part of the original application that the rating in the northwest corner is incorrect as it ignores the bus services that operate along Clifford Avenue. A bespoke PTAL assessment has been undertaken for the site and full details are included on TN047 - Stag Brewery PTAL Technical Note - Rev A (Appendix L).</p> <p>The assessment concludes that the PTAL score across the Site is in reality higher than the existing rating. The existing PTAL ratings show</p>	

<b>LBRuT Comment (27 May 2022)</b>	<b>Applicant Response (18 August 2022)</b>	<b>Revised information submitted (Y/N)</b>
	the site is predominantly 1a and 2 whereas the results of the updated assessment using PTAL published guidance shows the Site is largely PTAL 2 with some pockets of 3.	
<p>D. Questions are raised over the robustness of using data dating back to 2016 and 2017, given its age, impact of COVID and closure of Hammersmith Bridge. The TA states that TfL are satisfied with the traffic assessment. Confirmation is sought from TfL.</p>	<p>New traffic surveys have been undertaken at the junctions of Chalker’s Corner, Great Chertsey Road / Dan Mason Drive / Hartington Road, Upper Richmond Road / Clifford Avenue and Lower Richmond Road / Mortlake High Street to compare with the 2016 / 2017 data used in the assessment. Full details are included in TN048 – Traffic Data Comparison (Appendix M).</p> <p>The results have concluded that there is a general decrease in peak hour traffic (0800-0900 and 1700 – 1800) from 2016/17 to 2022, which is the assessment times based on when the development generates the highest trips on the surrounding network. This is due to more people now working from home and travelling outside of peak hours.</p> <p>It is therefore considered that the previous modelling work should still be considered satisfactory and robust, as it was based on higher baseline traffic data. No further junction modelling is therefore proposed at this time. In addition, it is noted, that prior to implementation of the Chalkers Corner scheme as part of the Traffic Management Act 2004 Notification (TMAN), the study area will be re-modelled with VISSIM and follow TfL’s VMAP process using updated traffic surveys at the time the application is raised.</p>	
<p>E. If concerns over the robustness of the TA are satisfied, the Chalker’s Corner light scheme is predicted to mitigate much of the traffic impact. The s106 would need to ensure the timely delivery of the</p>	Noted	

<b>LBRuT Comment (27 May 2022)</b>	<b>Applicant Response (18 August 2022)</b>	<b>Revised information submitted (Y/N)</b>
Chalker's Corner scheme. TfL will need to commit to such delivery.		
F. Remain concerned over the ability of ensuring the proposal model split is achieved.	<p>Stantec: "Mode shares for the school have been taken as an average of three travel plan targets for local schools provided by LBRuT. These schools, Richmond Park Academy, Christ's Secondary School and Grey Court Secondary, all have an existing PTAL (2) similar to that of the proposed development site at the moment. This was the agreed approach for both the original consented scheme and GLA call in scheme.</p> <p>The school Travel Plan will also be implemented and provide LBRuT with a means to measure and monitor the mode share with a view to reduce travel by car. Should targets that are set not be met then additional measures will be required to be implemented to ensure mode share targets are achieved."</p>	
<b>Ecology</b>		
A. Ecology reports (PEA and PSR dated March 2022): Surveys have all been carried out in October 2021 – therefore not following their own (or the BCT 2016 guidance) recommendations (para 5.18 of the PEA dated March 2022) for surveys to be carried out either 2 with a two week break or monthly for 3 months (between May to August). The Protected Species report (para 2.15) states that the reason for this is due to the previous planning application programme hearing in July 2021, it then goes on to say that this is not a constraint due to the historical surveys carried out "providing a robust baseline data" and "further surveys will be carried to determine if amendments are necessary to the mitigation measure currently	<p>Updated Ecology surveys are being undertaken on the site following a meeting on 7 July 2022 where the scope of the surveys was discussed.</p> <p>As set out in the ES Statement of Conformity, the surveys will be submitted to LBRuT in full in due course. Whilst the surveys are being undertaken, Waterman IE will update the Survey Results Spreadsheet (SS) every Friday.</p>	

<b>LBRuT Comment (27 May 2022)</b>	<b>Applicant Response (18 August 2022)</b>	<b>Revised information submitted (Y/N)</b>
<p>being proposed and to inform a licence application for NE". However, each survey is respectfully 3 years, 1 month and 2 years, 1 month apart, which is out of date and not as per the guidance.</p> <p>i. Internal surveys are still not supplied despite the availability of drones and other technology that could assist.</p> <p>ii. The Dec 2019 EIA has the Maltings wrongly numbered as B9 not B8.</p> <p>iii. The LPA expect a fully compliant suite of bat surveys over the summer period for a site of this complexity and size adjacent to the River Thames in the north and connecting to the railway and beyond in the south. The survey report needs to contain raw data and a plan to show the movement of bats seen on site.</p> <p>The LPA cannot assess or comment on these applications fully without the relevant and in date surveys, therefore have no alternative but to recommend refusal due to lack of Protected Species information at this time.</p>		
<p>Other comments:</p> <p>B. Light spillage - Demonstrate the new windows/internal light spill will not spill onto the river corridor or tree canopies, especially as brown long-eared bats have been recorded.</p>	<p>Given the final lighting design has not been designed at this stage, we would expect this to be dealt with via a condition for the final lighting design to be mindful of light spill to the river with lighting designed in compliance with the guidance published by the Institute of Lighting Professionals (ILP).</p>	
<p>C. Is there any reason why the meadow grassland by the school is not be included in the public realm area? What will the school be using it for? This would be a great addition to the public.</p>	<p>It is included. See - P10736-00-004-0701-03 Amenity Space and Green Space Calculation, prepared by Gillespies.</p>	



<b>LBRuT Comment (27 May 2022)</b>	<b>Applicant Response (18 August 2022)</b>	<b>Revised information submitted (Y/N)</b>
D. Uplighting of trees and buildings in the squares will not be acceptable	<p>Unclear if this comment is in relation to Application B as no squares are within the design.</p> <p>Uplighting has been removed from Application A.</p>	Y – updated drawings provided for Application A.
E. The Peregrine falcon is a real asset for the site and there is concern that carrying out phase 1 works adjacent to the potential nesting location will scare it away – this will need to be considered by an falcon expert	<p>Please see meeting notes from meeting held on 7 July 22 with LBRuT planning and ecology officers. The meeting notes were issued to LBRuT on 18 July 2022.</p> <p>Watermans have also provided the following response: We are in agreement that the peregrine falcon is an asset for the Site and local area. As detailed in the Ecology Chapter that supported the EIA, mitigation measures have been provided both during the post the Development.</p> <p>During the construction period a CEMP will detail the requirement for an Ecological Clerk of Works (ECoW) who is a recognized peregrine falcon expert to monitor the roost site at the Maltings until it can be confirmed that the peregrine is absent from the building. Works will then be undertaken at the Maltings to block access points previously utilised. Monitoring will continue prior to the refurbishment works commencing at the Maltings to ensure the bird does not return to the roost site. In addition, and as a precautionary approach, and to avoid any potential disturbance events (given only a single peregrine falcon was recorded on site) the refurbishment works at the Site would be timed to commence outside of the main peregrine falcon breeding season (assessed to be between February / March when courtship intensifies to June when the young normally fledge).</p>	

LBRuT Comment (27 May 2022)	Applicant Response (18 August 2022)	Revised information submitted (Y/N)
	<p>As part of the completed development a peregrine falcon nest box will be incorporated into the roof of the Maltings after the refurbishment works have been completed. This would be subject to a suitably worded planning condition. It is envisaged that this work would be overseen by an Ecological Clerk of Works (ECoW) who is a recognized peregrine falcon expert.</p> <p>A 'Landscape and Environment Management Plan' (LEMP), will also be provided as part of the completed development to ensure the peregrine nesting box has the best possible chance of uptake. The LEMP will ensure no direct lighting of the box and that measure are put in place for monitoring.</p>	
<p>F. What is the sqm of the biodiversity planting/area and where is it? it should not be the same planting areas as the play areas.</p>	<p>As the landscape is working really hard to accommodate large areas of greening along with the requirements for play, some of the amenity grassland areas will need to act as play areas. This is consistent with the play strategy, where play and nature are merged into one creating an immersive play experience for children. Please consult the UGF for sqm of each of the landscape typologies.</p>	
<p>G. Is there a plan to show the areas that are considered contributing to biodiversity.</p>	<p>The planting palette is indicative and it will be further developed at later stages - comment noted.</p>	
<p>H. The UGF for the school fails, this needs to be increased.</p>	<p>The originally submitted Landscape Design and Access Statement (page 79) sets out the proposed approach to the UGF for the school.</p> <p>This approach is considered acceptable.</p> <p>It is noted that the GLA support the proposed UGF.</p>	
<p>I. Brown roof should cater for the black redstart and more ledges for raptors.</p>	<p>Bird boxes (total 20 No.) are provided on roofs closer to the River Thames, including five Schwegler Boxes for swifts and fifteen (15) additional boxes for other bird types. These are to be oriented east or west to suit use.</p>	

LBRuT Comment (27 May 2022)	Applicant Response (18 August 2022)	Revised information submitted (Y/N)
	Watermans response: The brown roof will provide foraging habitat for black redstart and five black redstart boxes are to be provided as part of the completed development. In addition a peregrine falcon nesting box is to be installed at the Maltings.	
J. Plant species acceptable, except the crocosmia – this is a non-native species.	The planting palette is indicative and it will be further developed at later stages - comment noted	
<b>Waste</b>		
A. For a once weekly collection suitable and sufficient space for 14 x 1100L bins would be required. A plan is necessary to demonstrate the bin store location is suitable for servicing and that it is suitably sized for the number of bins required	Please see plan ref: 18125_C645_Z3_P_00_001 Rev C, prepared by Squire & Partners has been submitted to supersede the previously provided drawing. The drawing has been updated to highlight the bin store.	Y – updated plan provided
B. Suitable space should be provided for the recycling of food waste – this is a service currently provided to schools in Richmond.	Noted	
<b>Trees</b>		
Unable to recommend this proposal for approval until these comments and queries have been responded to – once received officers can provide full advice.	Please see responses provided by Waterman IE below.	
<p><b>Further detail required:</b></p> <p>a) CAVAT Valuation: The LPA will require a tree-by-tree "Full" CAVAT valuation (Including the calculation methodology for each tree), to be included for each tree in the tree survey and undertaken by an Arboriculturist experienced in using the method. This is to ensure that any loss of amenity from tree removals is, as a minimum, commensurate with the value of the new tree planting proposals. Individual CAVAT valuation will an integral part of ensuring that</p>	Please see paragraph 3.2 of the document provided by Waterman IE, dated 27 July 2022, titled 'Briefing Note – Response to Consultee Comments on Arboriculture' (ref: WIE18671-114-BN-3.3.2- Arboriculture Response) (Appendix E).	

<b>LBRuT Comment (27 May 2022)</b>	<b>Applicant Response (18 August 2022)</b>	<b>Revised information submitted (Y/N)</b>
<p>all retained trees, both within and adjacent to the site, will receive appropriate protection during the preparation, demolition, construction and conclusion phases of a long and complex project.</p> <p>i. A CAVAT valuation is required for the 3x Local Authority Street trees flagged for removal (T107, T152 &amp; T333), who's CAVAT valuation will be used to secure remuneration for off-site replacement tree planting in the public realm via a section 106 payment.</p>		
<p>b) Tree Root protection Areas (RPA). Update and provide existing site conditions: When illustrating the RPA of any tree trees, both on and adjacent to the site of the proposal. BS5837 (Trees in relation to design, demolition and construction - Recommendations: 2012) Section 4.6.2. specifies the following;</p> <ul style="list-style-type: none"> <li>• "Where pre-existing site conditions or other factors indicate that rooting has occurred asymmetrically, a polygon of equivalent area should be produced. Modifications to the shape of the RPA should reflect a soundly based Arboricultural assessment of likely root distribution."</li> <li>• These modifications are to account for and include but not be limited to; "The morphology and disposition of the roots, when influenced by past or existing site conditions (e.g. the presence of roads, structures and underground apparatus)"</li> <li>• RPA's in submitted Tree Constraint Plans (TCP) and Tree Protection Plans (TPP) must be calculated and modified to account for asymmetric root development</li> </ul>	<p>Please see paragraph 3.2 of the document provided by Waterman IE, dated 27 July 2022, titled 'Briefing Note – Response to Consultee Comments on Arboriculture' (ref: WIE18671-114-BN-3.3.2- Arboriculture Response) (Appendix E).</p>	

<b>LBRuT Comment (27 May 2022)</b>	<b>Applicant Response (18 August 2022)</b>	<b>Revised information submitted (Y/N)</b>
in the proximity of existing structures and hard surfacing as part of the full application.		
<p>c) Shading:</p> <p>i. The impact of shading needs to be assessed and incorporated as part of the submitted Arboricultural documentation.</p> <p>ii. There is also an increased risk that such shading will lead to an increase in post-development pressure on affected trees for their eventual removal. It must be stipulated that any such future requests for tree removal for these reasons will be resisted as per the Councils Local plan and tree policy.</p>	Please see paragraph 3.2 of the document provided by Waterman IE, dated 27 July 2022, titled 'Briefing Note – Response to Consultee Comments on Arboriculture' (ref: WIE18671-114-BN-3.3.2- Arboriculture Response) (Appendix E).	
d) Tree loss: Concerns around the future of T83-86 and T68 should be considered as part of a more detailed design that can be secured through the production of an Arboricultural Method Statement.	Please see paragraph 3.4-3.5 of the document provided by Waterman IE, dated 27 July 2022, titled 'Briefing Note – Response to Consultee Comments on Arboriculture' (ref: WIE18671-114-BN-3.3.2- Arboriculture Response) (Appendix E).	
e) Lighting Provision: The positioning and design of lighting in relation to proposed and existing trees needs to be carefully considered regarding potential obstructions to illumination (Especially regarding sports pitch lighting), with particular attention given to the requirement for increased management and maintenance of these trees as they grow. Potential obstructions need to be highlighted and alternative lighting positions submitted and agreed by the LPA in cases where such conflicts are identified.	Please see paragraph 3.2 of the document provided by Waterman IE, dated 27 July 2022, titled 'Briefing Note – Response to Consultee Comments on Arboriculture' (ref: WIE18671-114-BN-3.3.2- Arboriculture Response) (Appendix E).	
f) Hard Surfacing and Footpaths: Need to see that that sports surfacing, footpaths and other areas of hard surfacing areas near retained trees use a permanent no-dig solution (ie.cellweb), not just as protection	Please see paragraph 3.2 of the document provided by Waterman IE, dated 27 July 2022, titled 'Briefing Note – Response to Consultee Comments on Arboriculture' (ref: WIE18671-114-BN-3.3.2- Arboriculture Response) (Appendix E).	

<b>LBRuT Comment (27 May 2022)</b>	<b>Applicant Response (18 August 2022)</b>	<b>Revised information submitted (Y/N)</b>
measures during the demolition and construction phase. Design details and drawings (including a cross-section) will need to be supplied and be "site-specific".		
<p><b>Necessary amendments:</b></p> <p>g) Tree protection</p> <ul style="list-style-type: none"> <li>Section 8.13 of the report states "Tree protection should generally accord with the recommendations contained within BS5837:2012". Remove the word "Generally" and "Should" with "Will", unless otherwise previously agreed in writing with the local planning authority.</li> <li>A detailed Arboricultural Method Statement (AMS) incorporating a Tree Constraints Plan (TPP) and Tree Protection Plan (TPP) is required.</li> </ul>	This point is accepted, and the Arboricultural Impact Assessment has been revised accordingly.	Y – revised AIA submitted.
<p><b>Recommended Conditions:</b></p> <p>h) Tree planting - further information / detail</p> <p>i) Foundation design - details of foundation design and methodology for installation and construction that does not deleteriously impact nearby trees.</p> <p>j) Underground services - Impact on the roots of retained trees properly assessed. Where a conflict is identified, a methodology of installation that avoids damage to tree roots must be submitted to the LPA for approval.</p> <p>k) Tree protection</p>	Please see paragraphs 2.30-2.31 of the document provided by Waterman IE, dated 27 July 2022, titled 'Briefing Note – Response to Consultee Comments on Arboriculture' (ref: WIE18671-114-BN-3.3.2-Arboriculture Response) (Appendix E).	
<p><b>Recommended informatives:</b></p> <p>l) Foundation Design and a firm commitment made to the use of "Minimally invasive foundations" within RPA's of retained trees, where there is an incursion.</p>	Please see paragraphs 2.30-2.31 of the document provided by Waterman IE, dated 27 July 2022, titled 'Briefing Note – Response to Consultee Comments on Arboriculture' (ref: WIE18671-114-BN-3.3.2-Arboriculture Response) (Appendix E).	

LBRuT Comment (27 May 2022)	Applicant Response (18 August 2022)	Revised information submitted (Y/N)
<p>The pedestrian circulation drawing from 22/0900/FUL and school travel plan in 22/0902/OUT shows two routes being used through Mortlake Green, including as an off-road cycle route. The Parks team will look at this and get an updated quote to discuss as part of the potential s106 arrangements.</p>	<p>This is correct - See drawing ref: P10736-00-004-GIL-0125 of the Landscape drawing pack.</p> <p>Please advise on the quote.</p>	
<ul style="list-style-type: none"> <li>• Other contents of S106 / HOTs to follow</li> </ul>	<p>Noted – please advise on the details of the suggested HoTs.</p>	
<b>Environmental Health - Air Quality</b>		
<p><b>A. Demolition</b></p> <p>i. Likely effects on local air quality have been suitably assessed.</p> <p>ii. The Site is a high-risk site and suitable mitigation (as set out later in the ES Air Quality Chapter) is required to ensure that adverse effects are minimised to the maximum possible extent.</p>	<p>Air Quality comments initially addressed in note, prepared by Waterman IE, dated June 2022 (Appendix F).</p> <p>Further comments have since been issued by LBRuT, prepared by AQE Global, dated July 2022.</p> <p>Waterman IE have provided a further response in the ES Statement of Conformity at Annex 2 (Appendix G).</p>	<p>Y – note issued to LBRuT on 29 June 2022.</p> <p>Y- Annex 2 of the ES Statement of Conformity.</p>
<p><b>B. Input data and assumptions</b></p> <p>i. Vehicle emissions used</p> <ul style="list-style-type: none"> <li>• The input data used in the air quality modelling undertaken to predict pollutant concentrations in the opening year of the proposed development is not considered conservative and is likely to underestimate the impacts on existing receptors in the opening year.</li> </ul>	<p>Air Quality comments initially addressed in note, prepared by Waterman IE, dated June 2022 (Appendix F).</p> <p>Further comments have since been issued by LBRuT, prepared by AQE Global, dated July 2022.</p> <p>Waterman IE have provided a further response in the ES Statement of Conformity at Annex 2 (Appendix G).</p>	<p>Y – note issued to LBRuT on 29 June 2022.</p> <p>Y- Annex 2 of the ES Statement</p>

<b>LBRuT Comment (27 May 2022)</b>	<b>Applicant Response (18 August 2022)</b>	<b>Revised information submitted (Y/N)</b>
<ul style="list-style-type: none"> <li>• Given the sensitivity of the site, in terms of air pollution, a conservative approach should have been applied in the assumptions made.</li> <li>o It is known that Defra’s vehicle composition estimates projections are optimistic.</li> <li>o It is standard practice to assume at least a couple of years delay in the fleet composition as defined in the Emission Factor Toolkit database to account for a lower vehicle fleet turnover rate (for instance, to predict ambient air concentrations for 2029, 2026 or 2027 vehicle emissions should had been used instead for a more realistic – and conservative approach).</li> <li>o As an illustration, in 2022 the database assumes that 52% of all cars in Outer London are Euro 6c and 11% are Euro 6 standard which is overoptimistic and is unlikely to represent the real vehicle fleet in the study area).</li> </ul>		of Conformity.
<p>ii. Background years used</p> <ul style="list-style-type: none"> <li>• It has been assumed backgrounds are declining as per DEFRA’s estimated declining rates overtime which are equally optimistic.</li> <li>• Background levels should have also been conservative, and in line with earlier vehicle composition years of 2026 or 2027. To support this, the baseline pollution levels reported in the ES Air Quality Chapter are lower in comparison to both the LBRUT monitoring results for 2019 and LAEI modelled results for the same year. Therefore, predictions made for the opening year pollution levels are also like to be underestimated.</li> </ul>	<p>Air Quality comments initially addressed in note, prepared by Waterman IE, dated June 2022 (Appendix F).</p> <p>Further comments have since been issued by LBRuT, prepared by AQE Global, dated July 2022.</p> <p>Waterman IE have provided a further response in the ES Statement of Conformity at Annex 2 (Appendix G).</p>	<p>Y – note issued to LBRuT on 29 June 2022.</p> <p>Y- Annex 2 of the ES Statement of Conformity.</p>



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<p>iii. Traffic data used</p> <ul style="list-style-type: none"> <li>• It is unclear what trip generation (vehicles movements per day) is produced by the proposal. In the air quality neutral report (Table A4) refers to 97000 vehicle movements per year. Assuming a 200-day calendar year, that would equate to 485 trip generation (per day). However, the ES Transport assessment refers to different numbers being generated by the operation of the school, daily. Therefore, clarification is needed to ascertain the trip generation of the proposed school so that final air quality calculations can be undertaken.</li> <li>• Explanation to be provided on calculations undertaken to go from AM and PM peak generation to trip generation (daily and annual).</li> <li>• As a reference, GLA's Air Quality Neutral Guidance (2014) gives as an annual average TRAVL Trip Rates for D1 46.1 trips/m2 /annum (Table A1.1). This is significantly higher than the calculated trips/m2 /annum for the proposed school.</li> </ul>	<p>Air Quality comments initially addressed in note, prepared by Waterman IE, dated June 2022 (Appendix F).</p> <p>Further comments have since been issued by LBRuT, prepared by AQE Global, dated July 2022.</p> <p>Waterman IE have provided a further response in the ES Statement of Conformity at Annex 2 (Appendix G).</p>	<p>Y – note issued to LBRuT on 29 June 2022.</p> <p>Y- Annex 2 of the ES Statement of Conformity.</p>
<p>iv. Modal assumptions</p> <ul style="list-style-type: none"> <li>• The Education mode share has been taken as an average of three travel plan targets for local schools (Richmond Park Academy, Christ's Secondary School and Grey Court Secondary), have an existing PTAL (2) similar to that of the proposed development site at the moment. However, other considerations need to be taken into account including socioeconomic background of schoolchildren and post code of residence to ascertain whether the assumed 8% car</li> </ul>	<p>Air Quality comments initially addressed in note, prepared by Waterman IE, dated June 2022 (Appendix F).</p> <p>Further comments have since been issued by LBRuT, prepared by AQE Global, dated July 2022.</p> <p>Waterman IE Watermans have provided a further response in the ES Statement of Conformity at Annex 2 (Appendix G).</p>	<p>Y – note issued to LBRuT on 29 June 2022.</p> <p>Y- Annex 2 of the ES Statement of Conformity.</p>

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use by the students and staff is suitable or if it is an underestimation of vehicle movements associated with the operation of the proposed school.		
<p>v. Model verification and adjustment</p> <ul style="list-style-type: none"> <li>• The EHO at LBRuT has previously requested that urban background concentrations from the Wetlands Centre, Barnes were used in the air quality assessment. However, background concentrations from Defra’s predictions have been used instead. This is not supported; local measurements should had been used to ensure a robust assessment.</li> <li>• Given that verification and adjustment is compared with and applied on modelled road NOx concentrations, the higher the background values used in the baseline year, the lower the traffic contributions derived and the lower the adjustment factor required, which, again, does not provide a conservative approach.</li> </ul>	<p>Air Quality comments initially addressed in note, prepared by Waterman IE, dated June 2022 (Appendix F).</p> <p>Further comments have since been issued by LBRuT, prepared by AQE Global, dated July 2022.</p> <p>Waterman IE have provided a further response in the ES Statement of Conformity at Annex 2 (Appendix G).</p>	<p>Y – note issued to LBRuT on 29 June 2022.</p> <p>Y- Annex 2 of the ES Statement of Conformity.</p>
<p>vi. Monitoring data collected by the applicant</p> <ul style="list-style-type: none"> <li>• The monitoring data reported is not sufficient to characterise baseline conditions in the peer review undertaken. The submission has undertaken a six-month monitoring survey spanning from 9th July 2018 to 3rd January 2019 which consisted of deploying two NO2 diffusion tubes at 10 monitoring sites.</li> <li>o no information on the location of the monitoring sites used is provided (no tabulation of the eastings and northings nor mapping of locations were provided - Figure A1 is missing).</li> </ul>	<p>Air Quality comments initially addressed in note, prepared by Waterman IE, dated June 2022 (Appendix G).</p> <p>Further comments have since been issued by LBRuT, prepared by AQE Global, dated July 2022.</p> <p>Waterman IE have provided a further response in the ES Statement of Conformity at Annex 2 (Appendix G).</p>	<p>Y – note issued to LBRuT on 29 June 2022.</p> <p>Y- Annex 2 of the ES Statement of Conformity.</p>

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<p>o more recent and complete monitoring information is available to ascertain the baseline conditions to the application site, as published by LBRUT in their ASR 2020, reporting data for 2019. Namely, a full year of ratified data for 2019, which includes location ID74 and fully supported by GLAs modelling of NO2 annual mean values across the Borough for the same year.</p> <p>o Diffusion tubes ID 74 and ID 70 are located along the same road as the application site and report significantly higher values than the reported in the ES Chapter on air quality monitoring – this is also highlighted by GLA’s modelling of NO2 annual mean values along the application site for the same year (2019).</p>		
<p>C. Air quality levels:</p> <p>i. It is observed that in 2019 (before the pandemic), the schools closest air quality monitoring sites along Lower Richmond Road (ID 74 - Lower Rich Rd, Mortlake- near Chalker's corner and ID 70 - Stag Brewery, Lower Richmond Road), read 52 and 42ug/m3 respectively, and when adjusted to the façade of relevant exposure indicate 45.7 and 41.3 ug/m3 ambient air pollution levels, correspondingly, which are above the nitrogen dioxide (NO2) annual mean limit value set to safeguard human health. Given the close proximity of the school to the same road and the likely significant increase of traffic due to rerouting resulting from closure of Hammersmith bridge, schoolchildren would likely be exposed to elevated levels of air pollution (which safety limits are</p>	<p>Air Quality comments initially addressed in note, prepared by Waterman IE, dated June 2022 (Appendix F).</p> <p>Further comments have since been issued by LBRuT, prepared by AQE Global, dated July 2022.</p> <p>Waterman IE have provided a further response in the ES Statement of Conformity at Annex 2 (Appendix G).</p>	<p>Y – note issued to LBRuT on 29 June 2022.</p> <p>Y- Annex 2 of the ES Statement of Conformity.</p>

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<p>currently being revised by the epidemiological community). Therefore, the proposed location is considered of high risk for public exposure and not suitable for a school.</p> <p>ii. It is acknowledged that the air quality modelling results in the Air Quality Chapter of the ES (Chapter 10) submitted suggest annual mean values of NO<sub>2</sub> well below the limit value. However, the assessment is considered to be optimistic and has not followed a conservative approach, assuming backgrounds are declining as per DEFRA's rapid estimated declining rates as well as assuming the turnover of the national fleet to follow optimistic national predictions, with extremely high penetration of clean vehicles in 2029 (which is only seven years from now). It is also noted that the baseline pollution levels reported in the ES Air Quality Chapter are underestimated in comparison to the both the LBRUT monitoring results for 2019 and LAEI modelled results for the same year. Therefore, predictions made for the opening year pollution levels are also like to be underestimated.</p> <p>Figure 4 presents levels of pollution at the residential dwellings in close proximity to the road within air quality hot spots along the junction of Lower Richmond Rd and A316. As LAEI air pollution mapping indicates, properties are predicted to be exposed to values above the annual mean NO<sub>2</sub> limit value set to safeguard human health. The LAEI modelling is supported</p>		

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<p>by the Local Authority monitoring network, which in 2019 measured 52 ug/m<sup>3</sup> at monitoring site ID 74 (Lower Rich Rd, Mortlake - near Chalker's corner), which once corrected to the façade of relevant exposure indicates an annual mean value of 45.7 ug/m<sup>3</sup> for NO<sub>2</sub>, well above the limit value to protect human health.</p> <p>A. For a once weekly collection suitable and sufficient space for 14 x 1100L bins would be required. A plan is necessary to demonstrate the bin store location is suitable for servicing and that it is suitably sized for the number of bins required</p>		
<p>D. Air quality neutral calculations</p> <p>i. As per the traffic data provided, the proposal for the school is air quality neutral for transport emissions. However, several issues need to be fully clarified and agreed on before the air quality neutral status for the proposal can be confirmed:</p> <ul style="list-style-type: none"> <li>• The trip generation for the proposed school is excessively low, equating to 10.4 number of trips per m<sup>2</sup> per annum (trips/m<sup>2</sup>/annum). Average TRAVL trip rates for schools equate to 46.1 number of trips per m<sup>2</sup> per annum. The trip generation reported and used in the air quality calculations is 4.4 times lower.</li> <li>• The methodology used to derive the modal share associated with the operation of the proposed school,</li> </ul>	<p>Air Quality comments initially addressed in note, prepared by Waterman IE, dated June 2022 (Appendix F).</p> <p>Further comments have since been issued by LBRuT, prepared by AQE Global, dated July 2022.</p> <p>Waterman IE have provided a further response in the ES Statement of Conformity at Annex 2 (Appendix G).</p>	<p>Y – note issued to LBRuT on 29 June 2022.</p> <p>Y- Annex 2 of the ES Statement of Conformity.</p>

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<p>deviates from standard practice and is based on the rather optimistic assumption that Travel Plan targets (adopted by other schools) are already achieved for the proposed school. Whereas such targets are to be set in the School Travel plan and secured via a bond and or condition, it is considered inappropriate their use both in the air quality assessment and in the air quality neutral calculations, in the opening year of the proposal. This played a significant role in the excessive low trip generation used. In addition, taking an average of targets set for other schools of similar PTAL is based on the assumption that the same can be achieved at the location of the proposed school can easily prove unrealistic. Social economic factors as well as postcode of residence of the schoolchildren may result in differing trip rates. Standard procedures should be used; this will also secure consistency across other similar planning applications and achieve more realist estimates of traffic emissions. It is important to highlight that TFL also does not support the approach followed.</p> <ul style="list-style-type: none"> <li>• clarification is needed on trip generation value per day for the school to confirm the reported annual trip generation for 1200 students and 60 staff in the opening year without assuming the Travel Plan targets are met year zero.</li> <li>• a conservative approach is required so that the appropriate level of mitigation is ascertained and suitable mitigation measures are agreed, deployed and monitored.</li> </ul>		

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<ul style="list-style-type: none"> <li>The air quality neutral calculations will need to be confirmed, once the trip generation (daily) is mapped in a business-as-usual scenario, before the Travel Plan targets are achieved.</li> </ul>		
<p>E. Air quality positive observations</p> <p>i. additional work is required to agree suitable air quality positive measures for the proposed school.</p> <p>ii. no suitable air quality positive measures have been specifically selected and proposed and negotiations with the LA need to take place to agree and secure a suitable list of school specific air quality positive measures including, but not restricted to:</p> <ul style="list-style-type: none"> <li>o Relevant measures from the Mayors Schools Toolkit measures.</li> <li>o Green infrastructure incorporated into design of school to protect schoolchildren playground areas, entrance, etc</li> <li>o Make sure the layout of the school minimizes exposure to air pollution</li> <li>o Robust School Travel Plan</li> <li>o Consideration of green school buses</li> </ul>	<p>Air Quality comments initially addressed in note, prepared by Waterman IE, dated June 2022 (Appendix F).</p> <p>Further comments have since been issued by LBRuT, prepared by AQE Global, dated July 2022.</p> <p>Waterman IE have provided a further response in the ES Statement of Conformity at Annex 2 (Appendix G).</p>	<p>Y – note issued to LBRuT on 29 June 2022.</p> <p>Y- Annex 2 of the ES Statement of Conformity.</p>
<p>F. Recommendation</p> <p>i. Once appropriate traffic generation associated with the operation of the school is ascertained, officers can assess whether the proposal is air quality neutral</p> <p>ii. If not air quality neutral, suitable mitigation will be required to be calculated and secured via S106, because</p> <ul style="list-style-type: none"> <li>o the sensitivity of the application site area in terms of air pollution,</li> </ul>		<p>Y – note issued to LBRuT on 29 June 2022.</p> <p>Y- Annex 2 of the ES Statement</p>

LBRuT Comment (27 May 2022)	Applicant Response (18 August 2022)	Revised information submitted (Y/N)
<ul style="list-style-type: none"> <li>o the likely underestimation of the impacts of the proposed scheme on local air quality</li> <li>o the likely underestimation of the impacts of cumulative schemes on the school site itself,</li> <li>o the need to have school specific mitigation measures to make the proposal air quality positive in an effective and measurable way</li> <li>• Condition</li> <li>o Air Quality - Low Emission Strategy as Part of the School Travel Plan</li> <li>o Reducing Emissions from Demolition and Construction</li> </ul>		of Conformity.
<b>Environmental Health – Noise and Odour</b>		
<p>Recommend the following conditions:</p> <ul style="list-style-type: none"> <li>• Noise impact from demolition and construction activity upon residents in the vicinity of the development</li> </ul>	Please see para 1.11 of 'Briefing Note –Response to Consultee Comments on Noise', prepared by Waterman IE, dated 29 July 2022 (Appendix I).	
<ul style="list-style-type: none"> <li>• Dust emissions from demolition and construction activities impacting upon residential properties in the vicinity</li> </ul>	Agreed, subject to suitable condition wording.	
<ul style="list-style-type: none"> <li>• The internal noise of the proposed school requires protection</li> </ul>	Agreed, subject to suitable condition wording.	
<ul style="list-style-type: none"> <li>• Noise generated from the sports playing facilities and multi games use area (MUGA) Noise Control</li> </ul>	Please see paras 1.13-1.15 of 'Briefing Note –Response to Consultee Comments on Noise', prepared by Waterman IE, dated 29 July 2022 (Appendix I).	



<b>LBRuT Comment (27 May 2022)</b>	<b>Applicant Response (18 August 2022)</b>	<b>Revised information submitted (Y/N)</b>
• Details of the acoustic fencing for the sports pitch	Please see paras 1.16-1.19 of 'Briefing Note –Response to Consultee Comments on Noise', prepared by Waterman IE, dated 29 July 2022 (Appendix I).	
• Noise from mechanical services plant including heating, ventilation and air conditioning (HVAC) and kitchen extraction serving the proposed development affecting existing residential properties in the vicinity of the proposed development	Please see paras 1.20-1.21 of 'Briefing Note –Response to Consultee Comments on Noise', prepared by Waterman IE, dated 29 July 2022 (Appendix I).	
• Impact from odour from use of kitchen extraction equipment	Agreed, subject to suitable condition wording.	
• Light impact from the sports pitch lighting upon residents	Suggested condition wording requested.	
<b>Environmental Health – Contaminated Land</b>		
Recommends conditions	Please can details be provided of the recommended conditions	
<b>CIL</b>		
The actual amount of CIL can only be confirmed once all relevant details are approved and any relief claimed.	Noted	
<b>12. Lead Local flood Authority</b>		
a) Drainage hierarchy: MORE INFORMATION REQUIRED – the green roof and water butts should be shown on the drainage drawing.	See paragraphs 2.2-2.4 of the Drainage and Flooding response note, prepared by Waterman IE, dated August 2022 (Appendix N).	
b) Runoff rate: i. FAIL – The proposed runoff rate of 249l/s is much higher than the greenfield runoff rate of 44.1l/s. Consideration should be made to additional attenuation features such as blue roofs to reduce the proposed runoff rate. The site area used to calculate	See paragraphs 2.6, 2.8, & 2.10-2.15 of the Drainage and Flooding response note, prepared by Waterman IE, dated August 2022 (Appendix N).	

LBRuT Comment (27 May 2022)	Applicant Response (18 August 2022)	Revised information submitted (Y/N)
<p>the 100 year greenfield runoff rate of 44.1l/s should be confirmed. ii. MORE INFORMATION REQUIRED – the existing (brownfield) runoff rate needs to be supplied for 1 in 1 year event and a 1 in 30 year event. All runoff rates should be presented in the SuDS proforma. iii. The applicant has submitted information which has not sufficiently addressed policy relating to London Plan Policy SI 13. Until the above points are addressed, matters relating to volume control, Non-Statutory Technical Standards for SuDS S7-S9 and future maintenance have not been assessed due to their reliance on suitable proposals for sustainable drainage features and runoff rate restrictions.</p>		
<b>External Consultee responses</b>		
<p><b>No comments received from the following consultees</b></p> <ul style="list-style-type: none"> <li>• CCG</li> <li>• Transport for London</li> <li>• Greater London Authority</li> <li>• London Borough of Hammersmith &amp; Fulham</li> <li>• Natural England</li> <li>• Southern Western Train</li> <li>• Network Rail</li> </ul>	<p>The applicant is aware of responses from TfL, GLA and Network Rail since receipt of these comments.</p>	
<p><b>No objections raised from the following consultees (subject to conditions):</b></p> <ul style="list-style-type: none"> <li>• London Borough of Wandsworth</li> <li>• Environment Agency</li> <li>• Historic England (Archaeology</li> </ul>		
<p><b>Consultees not wishing to comment</b></p> <ul style="list-style-type: none"> <li>• London Borough of Hounslow</li> <li>• Historic England (planning)</li> </ul>		

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<ul style="list-style-type: none"> <li>• Secretary of State / National Planning Casework Unit</li> </ul>		
<p>1. Thames Water</p> <p>A. Waste Comments: With the information provided, Thames Water has been unable to determine the Foul water infrastructure needs of this application. Thames Water has contacted the developer in an attempt to obtain this information and agree a position for FOUL WATER drainage, but have been unable to do so in the time available</p>	<p>The Foul Water and Utilities Assessment issued as part of the application provided correspondence from Thames Water confirming that there was sufficient capacity in the sewage systems to serve the development (p. 46).</p>	
<p>B. SURFACE WATER drainage: Thames Water would advise that if the developer follows the sequential approach to the disposal of surface water we would have no objection.</p>	<p>Noted</p>	

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<p>C. Water Comments</p> <p>i. There are water mains crossing or close to your development. Thames Water do NOT permit the building over or construction within 3m of water mains</p> <p>ii. The proposed development is located within 5m of a strategic water main. Thames Water do NOT permit the building over or construction within 5m, of strategic water mains. Recommend condition.</p> <p>i. Following initial investigations, Thames Water has identified an inability of the existing water network infrastructure to accommodate the needs of this development proposal. Thames Water have contacted the developer in an attempt to agree a position on water networks but have been unable to do so in the time available</p>	<p>(i) Noted.</p> <p>(ii) The Foul Water and Utilities Assessment issued as part of the application provided Thames Water correspondence dated 17 November 2017 which states there are no diversions required. Under the diversions section the quote states <i>“From our records, we don’t anticipate that any clean water assets need to be diverted to accommodate your proposals.”</i></p> <p>(iii) As noted above for water comments.</p>	

LBRuT Comment (27 May 2022)	Applicant Response (18 August 2022)	Revised information submitted (Y/N)
<p>D. Groundwater:</p> <p>i. Thames Water expect the developer to demonstrate what measures will be undertaken to minimise groundwater discharges into the public sewer.</p> <p>ii. Informatives:</p> <ul style="list-style-type: none"> <li>• Where the developer proposes to discharge to a public sewer, prior approval from Thames Water Developer Services will be required.</li> <li>• There are public sewers crossing or close to your development. The applicant is advised to read the guide working near or diverting our pipes.</li> <li>• A Groundwater Risk Management Permit from Thames Water will be required for discharging groundwater into a public sewer</li> </ul> <p>iii. Conditions: No construction shall take place within 5m of the water main. Information detailing how the developer intends to divert the asset / align the development, so as to prevent the potential for damage to subsurface potable water infrastructure, must be submitted to and approved in writing by the local planning authority in consultation with Thames Water</p>	Noted	
<p>E. Foul water:</p> <p>i. Need to confirm the foul water manhole reference numbers which the development proposes to connect into.</p> <p>ii. Need to confirm which areas of the development will drain to each of those connection points to the public foul sewer system, to allow Thames Water to</p>	i.-iv. See paragraph 4.13 of the Drainage and Flooding response note, prepared by Waterman IE, dated August 2022 (Appendix N).	

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<p>calculate the impact of the additional foul flows on the local foul sewer system.</p> <p>iii. specify either the anticipated flow rate through each proposed foul water manhole, or the number and type of buildings (e.g. 300 dwellings, 500m2 of offices).</p> <p>iv. Regarding Surface Water, the site plans state that some surface water currently enters the foul sewer system and that this will be removed. Confirm what flow rate will be removed, and from which section of the foul sewer?</p>		
<p>2. Metropolitan Police</p> <p>a) Conditions - Secured by Design and evidence of such accreditation. (The design guidance contained within Secured by Design New Homes 2019, Commercial 2015 and Schools 2014 guides. These guides are subject to continual updates so the most recent guide should be referred to)</p> <p>b) Request discussions on:</p> <p>i. Permeability</p> <p>ii. CCTV</p> <p>iii. Lighting</p> <p>iv. Security for flats / communal entrances</p> <p>v. Gates, storage and outbuildings</p>	<p>Noted – discussions with Metropolitan Police would be welcomed as part of the detailed design process following the receipt of planning permission.</p>	
<p>3. Sport England</p> <p>No objections, subject to the proposals/S106/inclusion of planning conditions;</p> <p>a) Acoustic mitigation: A plan is required showing the location of an additional acoustic barrier and</p>	<p>Please see paras 1.23-1.27 of 'Briefing Note –Response to Consultee Comments on Noise', prepared by Waterman IE, dated 29 July 2022 (Appendix I).</p>	

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<p>confirmation from the Council's Environmental Health Officer that the artificial pitch can be used up to 9PM.</p> <p>b) Section 106 agreement</p> <p>a. To ensure the needs of Barnes Eagles were met and included the following provisions.</p> <ul style="list-style-type: none"> <li>• £90,750 [Index Linked] towards the provision of temporary football pitches.</li> <li>• Top-up Barnes Eagles Contribution of £45,375 paid upon every anniversary of the vacation date commencing on the third anniversary</li> <li>• The existing licence agreement for Barnes Eagles will not be terminated until the Initial Barnes Eagles contribution has been paid to Barnes Eagles.</li> </ul> <p>b. The whole of the area where the sports fields are located would not be built on (school and community park) until a contract has been signed with the school operator to build the school and the associated facilities;</p>		

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<p>c. Both the artificial pitch and sports hall are required to meet the needs of the residential development. Sport England requires that the legal agreement ensures that if it is decided not to build the school then the developer will provide a sports hall and artificial pitch within the Stag Brewery site OR will retain the existing playing field and sports pavilion and that this will be provided for use by the community with an appropriate management and maintenance scheme.</p>		
<p>d. Measures to ensure that any properties built near to the artificial pitch will not have balconies and have appropriate ventilation so that windows can be closed as needed when the pitch is in use. Sport England would like to review this text.</p> <p>e. Community use agreement</p> <p>c) Planning conditions</p> <p>a. Provision and design of sports hall and facilities</p> <p>b. Design and layout of AWP and MUGA</p> <p>c. Pitch quality</p> <p>d. Facility registered on the Football Association's Register of Football Turf Pitches</p> <p>e. Hours of AWP</p> <p>f. Management and Maintenance Scheme for the facility</p>	<p>Please see paras 1.28-1.30 of 'Briefing Note –Response to Consultee Comments on Noise', prepared by Waterman IE, dated 29 July 2022 (Appendix I).</p>	
<p>4. Marine Management Organisation</p> <p>a) Works below mean high water mark may require a Marine License</p>	<p>A consultation exercise with the MMO is ongoing, led by Waterman IE, separate to the planning process.</p>	



<b>LBRuT Comment (27 May 2022)</b>	<b>Applicant Response (18 August 2022)</b>	<b>Revised information submitted (Y/N)</b>
<p>b) A wildlife licence is required for activities that would affect a UK / European protected marine species.</p> <p>c) Environmental Impact Assessment - If this consultation relates to a project capable of falling within either set of EIA regulations, then it is advised that the applicant submit a request directly to the MMO to ensure any requirements under the MWR are considered adequately at the following link</p> <p>d) Marine Planning - Under the Marine and Coastal Access Act 2009 ch.4, 58, public authorities must make decisions in accordance with marine policy documents and if it takes a decision that is against these policies it must state its reasons.</p>		

**Health and Safety Executive (HSE) comments****Application A (ref: 22/0900/OUT)**

The table below sets out the Applicant's response to the comments received in respect of the applications for planning permission at the Former Stag Brewery site: Application A: for masterplan redevelopment (ref: 22/0900/OUT) on 27 May 2022 from the Health and Safety Executive (HSE).

<b>HSE comment (27 May 2022)</b>	<b>Applicant Response (27 July 2022)</b>	<b>Additional Information Submitted (Y/N)</b>
<b>Detailed</b>		
Regarding the first part of the hybrid application for the detailed application, it is noted that the proposed buildings contain blocks which are served by single staircases. In a fire scenario, the proposed single staircases operate as the escape stair as well as the firefighting stair.	See response provided on page 1 of Hoare Lea's document, titled 'Responses to the HSE Substantive Response for Stag Brewery', dated 27 July 2022 (Appendix P).	n/a
The buildings 2, 3, 6, 7, 8, 11 & 12 are connected by way of a basement containing a carpark and ancillary areas.	See response provided on pages 1-2 of Hoare Lea's document, titled 'Responses to the HSE Substantive Response for Stag Brewery', dated 27 July 2022 (Appendix P).	Yes – plans updated
<i>Means of escape and fire service access</i>		
The fire statement (section 7) and the plan drawings indicate that the single staircase of buildings 2, 7, 8, 11 & 12 descend to the basement level. The basement contains various ancillary areas such as a large carpark, multiple plant rooms, cycle stores and refuse areas, which connect with the single staircases by way of lobbies/corridors.	See response provided on page 2 of Hoare Lea's document, titled 'Responses to the HSE Substantive Response for Stag Brewery', dated 27 July 2022 (Appendix P).	Yes – plans updated
The fire safety standard states that a single stair should not serve a basement level. Moreover, where a staircase forms part of the only escape route from a flat, it should not serve ancillary accommodation (applicable in addition to buildings 4 and 10). Resolving these issues will affect land use planning considerations such as the design, layout and appearance of the development if, for example, separate stairs are to be provided for the basement level and no connection with the single stairs is ensured.	See response provided on page 2 of Hoare Lea's document, titled 'Responses to the HSE Substantive Response for Stag Brewery', dated 27 July 2022 (Appendix P).	Yes – plans updated

HSE comment (27 May 2022)	Applicant Response (27 July 2022)	Additional Information Submitted (Y/N)
<p>The plan drawings illustrate that the lifts in buildings 2, 7, 8, 11 &amp; 12 descend to the basement level. A lift should not continue down to serve a basement storey if it is in a building, or part of a building, served by only one escape staircase. Resolving this issue may affect land use planning considerations such as the design, layout and appearance of the development if, for example, separate lifts are to be provided for the basement.</p>	<p>See response provided on page 2 of Hoare Lea's document, titled 'Responses to the HSE Substantive Response for Stag Brewery', dated 27 July 2022 (Appendix P).</p>	<p>Yes – plans updated</p>
<p>The basement plan drawing of Area 1 illustrates multiple refuse stores designated to serve the above residential buildings. Due to the fire risks associated with waste, refuse stores should be approached solely from the outer air and should be separated from other parts of the building. Accordingly, design changes necessary to ensure appropriate location and separation of the bin stores will affect land use planning considerations such as the design and appearance of the development.</p>	<p>See response provided on page 2 of Hoare Lea's document, titled 'Responses to the HSE Substantive Response for Stag Brewery', dated 27 July 2022 (Appendix P).</p>	<p>Yes – plans updated</p>
<p>The planning statement (section 12.36) and the plan drawings indicate that the proposed development contains residential units which are designed as wheelchair user units. However, the fire statement (section 6) states that there are no such units ("none") and it does not provide information about any wheelchair user refuge in case of fire. When establishing the refuge areas, consideration should be given to the location of the dry riser outlets. The presence of charged fire hoses could hinder effective use of the disabled refuge; likewise, the use of a refuge could prevent access to the dry riser outlet. Ensuring suitable provision of disabled refuges may affect land use planning considerations such as the design and layout of the building as well as the health, safety and wellbeing of the future intended occupants.</p>	<p>See response provided on page 3 of Hoare Lea's document, titled 'Responses to the HSE Substantive Response for Stag Brewery', dated 27 July 2022 (Appendix P).</p>	<p>Yes – Fire Statement updated</p>
<p><b>Outline</b></p>		

HSE comment (27 May 2022)	Applicant Response (27 July 2022)	Additional Information Submitted (Y/N)
<p>Regarding the second part of the hybrid application for the outline application with all matters reserved, it is noted that there are some plan drawings illustrating the buildings design in principle. The buildings 13, 15, 16 &amp; 17 are connected by way of a basement containing a carpark and ancillary areas. It appears that these buildings contain blocks with single staircases which, in a fire scenario, operate as the escape stair as well as the firefighting stair.</p>	<p>See response provided on page 3 of Hoare Lea's document, titled 'Responses to the HSE Substantive Response for Stag Brewery', dated 27 July 2022 (Appendix P).</p>	<p>Yes – plans updated</p>
<i>Means of escape and fire service access</i>		
<p>The fire statement (section 7) and the plan drawings indicate that the single staircase of buildings 13, 15, 16 &amp; 17 descend to the basement level. The basement contains various ancillary areas such as a large carpark, multiple plant rooms, cycle stores and refuse areas, which connect with the single staircases by way of lobbies/corridors.</p>	<p>See response provided on page 3 of Hoare Lea's document, titled 'Responses to the HSE Substantive Response for Stag Brewery', dated 27 July 2022 (Appendix P).</p>	<p>Yes – plans updated</p>
<p>The fire safety standard states that a single stair should not serve a basement level. Additionally, where a staircase forms part of the only escape route from a flat, it should not serve ancillary accommodation. Resolving these issues will affect land use planning considerations such as the design, layout and appearance of the development if, for example, separate stairs are to be provided for the basement level and no connection with the single stairs is ensured.</p>	<p>See response provided on page 3 of Hoare Lea's document, titled 'Responses to the HSE Substantive Response for Stag Brewery', dated 27 July 2022 (Appendix P).</p>	<p>Yes – plans updated</p>
<p>The plan drawings illustrate that the lifts in buildings 13, 15, 16 &amp; 17 descend to the basement level. A lift should not continue down to serve a basement storey if it is in a building, or part of a building, served by only one escape staircase. Resolving this issue may affect land use planning considerations such as the design, layout and appearance of the development if, for example, separate lifts are to be provided for the basement.</p>	<p>See response provided on page 4 of Hoare Lea's document, titled 'Responses to the HSE Substantive Response for Stag Brewery', dated 27 July 2022 (Appendix P).</p>	<p>Yes – plans updated</p>

HSE comment (27 May 2022)	Applicant Response (27 July 2022)	Additional Information Submitted (Y/N)
<p>The basement plan drawing for Area 2 illustrates multiple refuse stores designated to serve the above residential buildings. Due to the fire risks associated with waste, refuse stores should be approached solely from the outer air and should be separated from other parts of the building. Accordingly, design changes necessary to ensure appropriate location and separation of the bin stores will affect land use planning considerations such as the design and appearance of the development.</p>	<p>See response provided on page 4 of Hoare Lea's document, titled 'Responses to the HSE Substantive Response for Stag Brewery', dated 27 July 2022 (Appendix P).</p>	<p>Yes – plans updated</p>
<p>Because the second part of the hybrid application for the outline application has all matters reserved, HSE is unable to provide a full comment for this part. Should the Local Planning Authority be minded to grant outline planning permission, we strongly recommend the following:</p> <ul style="list-style-type: none"> <li>• the outline planning permission is subject to a suitable condition requiring the submission of a satisfactory fire statement with any reserved matters application, and</li> <li>• that HSE is consulted in conjunction with the Local Planning Authority's consideration of any reserved matters application.</li> </ul>	<p>See response provided on page 4 of Hoare Lea's document, titled 'Responses to the HSE Substantive Response for Stag Brewery', dated 27 July 2022 (Appendix P).</p>	<p>n/a</p>
<p>This would ensure the purpose of HSE being made a statutory consultee for such applications is achieved.</p>	<p>Noted</p>	<p>n/a</p>
<p>It is recommended that the applicant uses the fire statement form available on gov.uk to provide the fire safety information.</p>	<p>Noted</p>	<p>n/a</p>
<p><b>2. Supplementary Information for the applicant</b></p>		
<p>Regarding the basement car parks for Area 1 and Area 2, the planning statement (section 15.15) states that "20% of car parking spaces will be provided with active electric charging provision, and 100% of the remaining spaces will be provided with passive electric charging provision". It may be advisable to consider the risk to fire safety by the presence</p>	<p>See response provided on page 5 of Hoare Lea's document, titled 'Responses to the HSE Substantive Response for Stag Brewery', dated 27 July 2022 (Appendix P).</p>	<p>n/a</p>

HSE comment (27 May 2022)	Applicant Response (27 July 2022)	Additional Information Submitted (Y/N)
<p>of the electric vehicles (EVs) in the basement car parks as well as the presence of electric bikes because they contain lithium-ion batteries. Lithium-ion batteries may suffer thermal runaway and cell rupture, releasing large volume of toxic gases, heat and smoke before catching fire as well as afterwards. When they burn, a large amount of water is needed to flow on the batteries, however, fire keeps flaring up even after it appears to be extinguished. Furthermore, there is a danger of electrical shock for firefighters tackling a fire due to the high voltage used in EVs. Any consequent design changes may affect land use planning considerations such as layout, appearance, and car parking provision of the development.</p>		
<p>The plan drawings illustrate that the buildings 2, 7 &amp; 8 contain firefighting lifts with dual entry. The fire safety standard states that the use of dual entry firefighting lifts is not recommended in residential buildings. Any consequent changes, in rectifying this may affect land use planning considerations such as design and appearance of the development, including the main entrance arrangements more generally.</p>	<p>See response provided on page 5 of Hoare Lea's document, titled 'Responses to the HSE Substantive Response for Stag Brewery', dated 27 July 2022 (Appendix P).</p>	<p>Yes – plans updated</p>
<p>The fire statement (section 8) states that "certain corridors have extended travel distances in a single direction and is addressed with a fire engineered justification including the provision of additional smoke ventilation." However, if an engineered approach to fire safety is applied, then a "Qualitative Design Review" (QDR) is needed to determine whether the fire safety provisions are appropriate. As part of the hazard assessment process, an assessment of "what if" events should be made to identify system failures or foreseeable events that might have a significant influence on</p>	<p>See response provided on page 5 of Hoare Lea's document, titled 'Responses to the HSE Substantive Response for Stag Brewery', dated 27 July 2022 (Appendix P).</p>	<p>Yes – preliminary QDR will be carried out in due course and issued to LBRuT.</p>

HSE comment (27 May 2022)	Applicant Response (27 July 2022)	Additional Information Submitted (Y/N)
the outcome of the study. An example could be “what if” the power supply to smoke vents fails?		
From the information provided on the fire statement it does not appear that a QDR has been undertaken, such that it has informed the design presented to the LPA. In circumstances such as this, best practice is for a QDR to be undertaken concurrently with design development, prior to the submission of a planning application. This approach would provide explanatory information to support the planning application. The outcome of the QDR could result in design changes which may affect land use planning considerations.	See response provided on page 6 of Hoare Lea’s document, titled ‘Responses to the HSE Substantive Response for Stag Brewery’, dated 27 July 2022 (Appendix P).	Yes – preliminary QDR will be carried out in due course and issued to LBRuT.
The plan drawings of building 4 illustrate the firefighting stairs and lifts to run blind through the 4th floor. The fire statement (section 4) states that no formal consultation has been undertaken to date. However, it should be determined that there is adequate access for fire-fighting personnel to set up a bridgehead on any required floor. Additionally, the fire safety standard states that where lifts are proposed to run blind there should be early consultation with the local fire and rescue service. Any subsequent changes may affect land use planning consideration such as the design and layout of the development.	See response provided on page 7 of Hoare Lea’s document, titled ‘Responses to the HSE Substantive Response for Stag Brewery’, dated 27 July 2022 (Appendix P).	Yes – plans updated
The fire statement (section 13) states that “some existing public hydrants are provided within 90m of all blocks. Where this is not the case, additional private hydrants will be provided.” However, the fire service site plan (fire statement, section 14) does not illustrate the water hydrants’ locations that the proposed development relies on and associated distances.	See response provided on page 7 of Hoare Lea’s document, titled ‘Responses to the HSE Substantive Response for Stag Brewery’, dated 27 July 2022 (Appendix P).	n/a
It is noted that some buildings are not relevant buildings as their height is under 18 m, however, they are within the	See response provided on page 7 of Hoare Lea’s document, titled ‘Responses to the HSE Substantive	Yes – plans updated

HSE comment (27 May 2022)	Applicant Response (27 July 2022)	Additional Information Submitted (Y/N)
curtilage of the relevant buildings. The following advice is offered with that context in mind.	Response for Stag Brewery', dated 27 July 2022 (Appendix P).	
The fire statement (section 7) and the plan drawings indicate that the single staircase of buildings 3 and 6 descend to the basement level. The basement contains multiple ancillary areas such as a large carpark, multiple plant rooms, cycle stores and refuse areas, which connect with the single staircases by way of lobbies/corridors.	See response provided on page 7 of Hoare Lea's document, titled 'Responses to the HSE Substantive Response for Stag Brewery', dated 27 July 2022 (Appendix P).	Yes – plans updated
The fire safety standard states that a single stair should not serve a basement level. Moreover, where a staircase forms part of the only escape route from a flat, it should not serve ancillary accommodation (applicable in addition to building 9). Resolving these issues will affect land use planning considerations such as the design, layout and appearance of the development if, for example, separate stairs are to be provided for the basement level and no connection with the single stairs is ensured.	See response provided on pages 7-8 of Hoare Lea's document, titled 'Responses to the HSE Substantive Response for Stag Brewery', dated 27 July 2022 (Appendix P).	Yes – plans updated
The plan drawings illustrate that the lifts in buildings 3 and 6 descend to the basement level. A lift should not continue down to serve a basement storey if it is in a building, or part of a building, served by only one escape staircase. Resolving this issue may affect land use planning considerations such as the design, layout and appearance of the development if, for example, separate lifts are to be provided for the basement.	See response provided on page 8 of Hoare Lea's document, titled 'Responses to the HSE Substantive Response for Stag Brewery', dated 27 July 2022 (Appendix P).	Yes – plans updated

### **Appendices**

- A. Excel Spreadsheet, prepared by BNP Paribas, dated 13 June 2022 (issued to LBRuT on 13 June 2022).
- B. 'Briefing Note', prepared by Montagu Evans, dated 9 August 2022.
- C. RHP Letter, dated 15 June 2022 (issued to LBRuT on 16 June 2022).
- D. 'Consultees Responses' note, prepared by BNP Paribas, dated 28 July 2022.



- E. 'Briefing Note – Response to Consultee Comments on Arboriculture' (ref: WIE18671-114-BN-3.3.2-Arboriculture Response), dated 27 July 2022.
- F. Air Quality Response Note, prepared by Waterman IE, dated June 2022 (issued to LBRuT on 29 June 2022).
- G. Annex 2: Air Quality Assessment Update of the ES Letter of Conformity, prepared by Waterman IE.
- H. Air Quality Responses (ref: WIE18671-114-BN-1.2.5-AQ Response), prepared by Waterman IE, dated August 2022.
- I. 'Briefing Note –Response to Consultee Comments on Noise', prepared by Waterman IE, dated 23 June 2022 (issued to LBRuT on 29 June 2022).
- J. Indicative school green wall elevation, prepared by Squire & Partners, ref: C645\_Z3\_E\_AL\_002.
- K. TN045 - Assessment of Rail Impacts - Rev A, dated 27 June 2022, prepared by Stantec.
- L. TN047 - Stag Brewery PTAL Technical Note - Rev A, dated 1 July 2022, prepared by Stantec.
- M. TN048 - Traffic Data Comparison, dated July 2022, prepared by Stantec.
- N. Drainage Response Note, prepared by Waterman IE, dated August 2022.
- O. Email from Fulham Reach Boat Club, dated 17 June 2022.
- P. HSE Response Note, dated 27 July 2022, prepared by Hoare Lea.

## **4. GLA Stage 1 Response Tracker**

Prepared by the Applicant

Dated 18th August 2022

(pages 130 – 158)

### GLA Stage 1 Report: Applicant Response

The table below has been prepared on behalf of the Applicant, Reselton Properties Ltd, to provide responses to comments received from the Greater London Authority ('GLA') within their Stage 1 report dated 20 June 2022 (ref: GLA/2022/0288/S1/01) in respect of the linked applications for planning permission for the masterplan redevelopment of the Stag Brewery (London Borough of Richmond upon Thames ('LBRuT') refs: 22/0900/OUT and 22/0902/FUL).

A list of Appendices to the responses provided in the table has been included at the end of this document.

<b>Topic</b>	<b>GLA Comment (20 June 2022)</b>	<b>Applicant Response (18 August 2022)</b>
Loss of industrial floorspace (para 32)	The former brewery was in industrial use and therefore comprises a nondesignated industrial site for the purpose of London Plan Policy E7. However, the site has been allocated for mixed use development in the Local Plan and the proposed land uses (which does not include industrial floorspace) is in line with the land use aspirations set out in the Local Plan. Therefore, the loss of industrial floorspace capacity can be supported, in line with the criteria set out in Part C of London Plan Policy E7.	Noted
Loss of playing fields (paras 33-40)	At Stage 3, GLA officers concluded that the loss of protected sports and recreation facilities could be outweighed by equivalent or better provision and that the scheme would comply with London Plan Policy S5, subject to the obligations and financial contributions being secured as detailed in the GLA's Stage 3 report. The conclusion of GLA officers on this matter is unchanged in respect of this application, given the details are the same.	Noted
Open space (paras 41-42)	As noted above, the existing open space is private and is not fully accessible to the public. The reconfiguration of the open space is also envisaged in the Local Plan Site Allocation and Planning Brief SPD. At Stage 3, GLA officers concluded that the proposed rearrangement of OOLTI land would represent an increase in the quantum, quality, functionality and accessibility of public realm and areas of open land across the site and the application therefore complies with London Plan Policy G4. The same conclusion is reached on this application.	Noted

Topic	GLA Comment (20 June 2022)	Applicant Response (18 August 2022)
Housing supply (para 43)	London Plan Policy H1 sets a London wide 10-year housing target for 522,870 net additional housing completions by 2029, with Richmond set a 10-year target of 4,110 homes during this period. The provision of 1,085 residential homes would make a significant contribution towards meeting these housing targets, with the proposed scheme equating to 26% of the Council's 10-year housing requirement.	As a result of responding to consultation responses from the HSE and LBRuT the total proposed residential unit number has been reduced by 14, to: up to 1,071 units. This still represents 26% of the Council's 10-year housing requirement.
Office, commercial and night-time economy uses (paras 44-47)	The range and type of non-residential use is broadly the same as with the previous application which was considered by the Mayor as detailed below. The cinema and hotel are identical and the quantum of office and flexible commercial use broadly comparable. Whilst the town centre uses are not within a designated town centre, the proposals do accord with the land use objectives set out in the Local Plan Site Allocation and Mortlake Area of Mixed Use Designation.	Noted
	The applicant is proposing the following maximum and minimum caps on floorspace provision. This is acceptable. Affordable workspace was agreed (circa 10% of the office floorspace) on the previous application and should be secured. Conditions should be secured to limit the size of ground floor commercial units.	Noted
	Night-time economy uses are proposed in the form of a cinema and pub / bar. These are as was proposed in the previous planning application considered by the Mayor. The overall mix, quantum and distribution of commercial, office, leisure and community use is in general accordance with the aspirations set out in the Local Plan Site Allocation, Planning Brief and the Mortlake Area of Mixed Use designation and would not conflict with policies in the London Plan relating to office and business uses and promoting town centres and the night time economy.	Noted
	No issues arise in terms of the Agent of Change principle and the requirements of London Plan Policies D13 and D14 in relation to the Ship Public House and Jolly Gardeners Public House.	Noted
Education use (48-50)	London Plan Policy S3 states that boroughs should ensure there is a supply of good quality education facilities based on need assessments and sets out criteria in Part B which should be applied to development	Noted

Topic	GLA Comment (20 June 2022)	Applicant Response (18 August 2022)
	proposals for new schools. A number of objections were raised on the previous application in relation to the provision of a new secondary school on this particular site in terms of the potential impact on amenity, open space, transport, traffic congestion and air quality impacts, the GLA's Stage 3 report considered the proposals to be in accordance with local, strategic and national planning policy requirements. The same conclusion is also reached on this application.	
Conclusion land use principles (51)	The comprehensive mixed use redevelopment of the site including the proposed land uses is in line with the land use objectives set out in the Local Plan Site Allocation and Planning Brief SPD and would accord with London Plan Policies H1, E7, S3, S5, G4 and SD6.	Noted
Housing and Affordable Housing (52- 68)	The Mayor has set a strategic target for 50% of all new homes to be affordable, as set out in Policy H4 of the London Plan. Policy H5 of the London Plan identifies a minimum threshold of 35% affordable housing (by habitable room), with a higher threshold of 50% applied to public sector owned land and industrial sites where the scheme would result in a net loss of industrial capacity. Applications which do not meet these requirements should follow the Viability Tested Route and subject to both early and late stage review mechanisms and in the case of large phased schemes, a mid-term review. The application is subject to the 50% threshold in the London Plan as the site comprises former industrial land.	The Viability of the scheme has been the subject of robust scrutiny by LBRuT's own independent advisors. The Applicant is in discussions with LBRuT on all viability matters including other financial obligations being sought as well as the precise mix of tenure. The outcome of these discussions will affect the precise quantum of affordable housing that the scheme will be able to support.
	Richmond's Local Plan Policy LP36 states that 50% of all housing units will be affordable comprising a tenure mix of 40% of affordable rent and 10% affordable intermediate products (i.e. 80% of all affordable housing as affordable rent, and 20% as intermediate). Former employment sites are expected to provide at least 50% on-site affordable housing.	The Viability of the scheme has been the subject of robust scrutiny by LBRuT's own independent advisors. The Applicant is in discussions with LBRuT on all viability matters including other financial obligations being sought as well as the precise mix of tenure. The outcome of these discussions will affect the precise quantum of affordable housing that the scheme will be able to support.
	The applicant's Design and Access Statement (page 55) and Planning Statement (Appendix D) states that the revised application is proposing	The Viability of the scheme has been the subject of robust scrutiny by LBRuT's own independent advisors. The Applicant is in discussions with LBRuT on all viability

Topic	GLA Comment (20 June 2022)	Applicant Response (18 August 2022)
	23% affordable housing by habitable room with a 83:17 tenure mix weighted towards social rent (20% by unit, with a 77:23 tenure mix).	matters including other financial obligations being sought as well as the precise mix of tenure. The outcome of these discussions will affect the precise quantum of affordable housing that the scheme will be able to support.
	However, following submission of the application the applicant has since confirmed that this does not represent their affordable housing offer which it has confirmed is 15% affordable housing by unit (17% by habitable room), with the tenure mix being 20% social rent and 80% intermediate shared ownership. This proposal would equate to the following in terms of units: [table then included in the report]	The Viability of the scheme has been the subject of robust scrutiny by LBRuT's own independent advisors. The Applicant is in discussions with LBRuT on all viability matters including other financial obligations being sought as well as the precise mix of tenure. The outcome of these discussions will affect the precise quantum of affordable housing that the scheme will be able to support.
	The currently proposed quantum and tenure mix of affordable housing is wholly unacceptable. The quantum of social rent on the proposed scheme is just 3% (33 homes), despite this being the Council's preferred affordable housing tenure as set out in the Local Plan.	The Viability of the scheme has been the subject of robust scrutiny by LBRuT's own independent advisors. The Applicant is in discussions with LBRuT on all viability matters including other financial obligations being sought as well as the precise mix of tenure. The outcome of these discussions will affect the precise quantum of affordable housing that the scheme will be able to support.
	The overall level of affordable housing should be significantly increased and the tenure mix should be revised so that it is weighted in favour of social rent, given the local and strategic affordable housing policies and evidence of housing need and affordability issues.	The Viability of the scheme has been the subject of robust scrutiny by LBRuT's own independent advisors. The Applicant is in discussions with LBRuT on all viability matters including other financial obligations being sought as well as the precise mix of tenure. The outcome of these discussions will affect the precise quantum of affordable housing that the scheme will be able to support.
	The table below sets out how the revised scheme compares to the original planning application considered by Richmond Council in 2020 and the revised application which was considered by the Mayor at a Representation Hearing in 2021. It unclear why the number of market	The Viability of the scheme has been the subject of robust scrutiny by LBRuT's own independent advisors. The Applicant is in discussions with LBRuT on all viability matters including other financial obligations being

Topic	GLA Comment (20 June 2022)	Applicant Response (18 August 2022)
	homes in the current scheme has increased to 918 (+24 homes) and yet the number of affordable homes has more than halved numerically (-189 homes), with the tenure split worsened substantially. The tenure proposed is now weighted substantially in favour of intermediate in contrast to the scheme which was considered by Richmond Planning Committee in 2020.	sought as well as the precise mix of tenure. The outcome of these discussions will affect the precise quantum of affordable housing that the scheme will be able to support.
	The applicant's updated Financial Viability Assessment (FVA) concludes that the scheme with 17% affordable housing by habitable room, with the proposed tenure split heavily weighted in favour of intermediate housing, is not viable. This has been assessed against a profit requirement of 20% of the Gross Development Value (GDV) of the market housing. This profit level has not been substantiated and is considered excessive.	The Viability of the scheme has been the subject of robust scrutiny by LBRuT's own independent advisors. The Applicant is in discussions with LBRuT on all viability matters including other financial obligations being sought as well as the precise mix of tenure. The outcome of these discussions will affect the precise quantum of affordable housing that the scheme will be able to support.
	There are a number of elements to the scheme that impact on the viability including the large basement car park and the cinema. They are included in the assessment at significant cost but at values much lower than these costs. For example, according to the applicant's FVA, the basement would cost circa £66.9 million to construct yet only generates a value at approximately £20.4 million. Similarly, the capital cost of the cinema (including £1 million fit out costs) equates to circa £6.9 million yet only generates a value of £4.1 million.	See note prepared by BNP Paribas, dated 28 July 2022 (Appendix A).
	Clearly, the design decision to incorporate such a large basement within the scheme has a substantial impact on the overall viability of the scheme. Whilst this has design benefits in terms of the quality of the public realm and the reduction in on-street car parking and vehicle movements within the site, the scheme could have been designed to minimise the need for a basement, for example, by incorporating lower levels of standard car parking spaces and incorporating cycle parking and disabled car parking within ground floor podiums wrapped with active residential and non-residential uses at ground floor level. Given the impact on viability, this design decision should be fully justified and the applicant should be required to demonstrate that the provision of	See note prepared by BNP Paribas, dated 28 July 2022 (Appendix A).

Topic	GLA Comment (20 June 2022)	Applicant Response (18 August 2022)
	<p>the basement in this instance has not come at the cost of affordable housing provision within the scheme.</p> <p>The applicant sets out that this scheme will provide ‘a new village heart for Mortlake based upon buildings and open public realm of the highest quality’ and the large basement and the cinema are justified as part of the overall concept for this scheme. However, this is not reflected in their assumed values.</p>	<p>The cinema will contribute to the placemaking to be delivered by the scheme. The site is located within an Area for Mixed Use (under LBRuT Local Plan) where town centre uses, such as cinema, that serve the local needs will be considered acceptable. In addition, the site is also subject to a Site Allocation which supports town centre uses, as does the SBPB. Therefore the development of a cinema as part of the town centre uses at the site is considered a wholly appropriate use within the proposed masterplan.</p> <p>It is worth noting that in paragraph 222 of the GLA’s Hearing Report of July 2021, stated the following in respect of the proposed cinema: <i>“In the above policy context [the cinema use is] strongly supported in providing a diversified offering of night-time economy land uses in this Area of Mixed Use.”</i></p>
	<p>The outcome of the applicant’s FVA assumes a large deficit which may indicate the under valuation and/or the sub optimisation of the scheme. The applicant has not demonstrated that the scheme is deliverable and that the inputs and overall valuation should be cross-checked against market transactions. It would be appropriate for the target profit to be cross checked against other measures including the Internal Rate of Return to ensure the outcome of testing is robust and it is also important for growth to be modelled on a scheme of this size.</p>	<p>The Viability of the scheme has been the subject of robust scrutiny by LBRuT’s own independent advisors. The Applicant is in discussions with LBRuT on all viability matters including other financial obligations being sought as well as the precise mix of tenure. The outcome of these discussions will affect the precise quantum of affordable housing that the scheme will be able to support.</p>
	<p>At this stage, GLA officers consider that it is likely that both the quantum of affordable housing can be increased and the tenure mix improved in favour of social rent, if both the placemaking potential and future growth are taken into account in the residential values and the scheme is measured against a more realistic developer’s return.</p>	<p>The Viability of the scheme has been the subject of robust scrutiny by LBRuT’s own independent advisors. The Applicant is in discussions with LBRuT on all viability matters including other financial obligations being sought as well as the precise mix of tenure. The outcome of these discussions will affect the precise</p>



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	<p>However, the GLA have not yet concluded their review as the borough's cost review has not been provided to date.</p> <p>GLA officers consider that additional affordable housing units could be accommodated within the same envelope in Building 18 (which is designated as an affordable housing block). This would increase the overall quantum of affordable housing as well as generating additional value for the scheme. The residential homes within Building 18 are substantially larger than the minimum size standards set out in the London Plan and compared to affordable homes located in similar mansion block typologies set within schemes reviewed by the GLA. The applicant should further investigate the potential to include additional affordable homes in Building 18 within the proposed building footprint and layout whilst maintaining generously sized units and retaining the unit mix proportions set out in the applicant's unit schedule and also avoiding any directly north-facing single aspect units, in line with London Plan Policy D6. This optimisation work should be undertaken at application stage, in line with London Plan Policy H4 which expects all schemes to maximise the delivery of affordable housing which should then be secured from the outset via S106 obligations.</p>	<p>quantum of affordable housing that the scheme will be able to support.</p> <p>Building 18 has been designed in outline. The final internal layout is subject to detailed design at Reserved Matters stage.</p> <p>It is worth noting that under the LBRuT 'resolved to approve' scheme in Jan 2020, it was agreed with LBRuT (see paragraph 7.1.78 of the Jan 2020 Planning Committee Report) that the potential harm of any larger residential units within Building 18 could be mitigated through an appropriately worded Heads of Term for the s106 agreement, requiring:</p> <ul style="list-style-type: none"> <li>i) Prior to the implementation of Phase 1a (save basement works) an affordable housing scheme (identifying location, floor areas, mix, tenure, rent levels, service charge levels, terms of the transfer of land) shall be submitted to the LPA for approval. Taking into the requirement that units should be no larger than 10% of the NDSS, the scheme will consider whether an uplift in affordable housing units can be delivered within Building 18.</li> <li>ii) Not to occupy more than 80% of the market units within Phase 1b, until the reserved matters application or where an uplift is feasible, a further application is submitted and determined (either full planning, variation of condition or non-material amendment), to increase the number of units.</li> </ul>

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	<p>In addition to this, GLA officers are concerned that the applicant is proposing Block 18 as one of the first phases of the scheme, yet it is shown in outline rather than in detail. Further explanation should be provided on this issue.</p>	<p>It is considered that a similar approach for the proposals submitted under this application would be acceptable.</p> <p>See response immediately above.</p>
Mid-Stage Review	<p>A mid-stage viability review should be secured given the size and quantum of housing proposed which would involve numerous blocks and phases. The midreview should be secured, in line with the London Plan and the Mayor's Affordable Housing and Viability SPG.</p>	<p>A mid-stage review will be undertaken via an obligation under the s106 Agreement.</p>
Affordability	<p>Policy H6 of the London Plan sets out the Mayor's preferred affordable housing tenures, which includes social rent/London Affordable Rent; London Living Rent and London Shared Ownership. Paragraphs 4.6.3 to 4.6.10 of the London Plan sets out the Mayor's definition of genuinely affordable housing by tenure. The following key comments are made in terms of tenure and affordability:</p> <ul style="list-style-type: none"> <li>• Low-cost rent products should be secured at social rent or London Affordable Rent (LAR) levels, in line with the published LAR benchmarks. These are significantly less than the NPPF definition for affordable rent, which is not considered affordable as a low cost rent product in London.</li> <li>• London Shared Ownership units should be affordable to households on incomes up to a maximum of £90,000 a year and a range of affordability levels should be provided below the maximum £90,000 household income cap.</li> <li>• All intermediate tenure households should not be required to spend more than 40% of their net income on overall housing costs, including service charges.</li> <li>• Should any intermediate rent products, such as Discount Market Rent (DMR) or London Living Rent (LLR) be subject to a maximum income</li> </ul>	<p>The Viability of the scheme has been the subject of robust scrutiny by LBRuT's own independent advisors. The Applicant is in discussions with LBRuT on all viability matters including other financial obligations being sought as well as the precise mix of tenure. The outcome of these discussions will affect the precise quantum of affordable housing that the scheme will be able to support.</p>

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	<p>cap of £60,000, with a range of incomes secured below the maximum cap for any DMR units.</p> <ul style="list-style-type: none"> <li>• Generally shared ownership is not appropriate where market values of the new homes are likely to exceed £600,000 as set out in the Mayors Affordable Housing &amp; Viability SPG. Where this is the case, for example, homes should be provided as intermediate rent (either London Living Rent or Discount Market Rent).</li> </ul> <p>On the previous application, GLA officers negotiated intermediate housing at a range of income levels as set out in paragraph 324 to 329 of the GLA's Stage 3 Hearing Report. These key obligations ensured that the affordable housing tenures complied with the Mayor's definition of genuinely affordable housing as set out in the London Plan.</p>	
Children's play space (69)	<p>Play space requirements have been calculated using the GLA's play space calculator and based on the required standard of 10 sq.m. of play space provision per child. The site wide requirements for the revised scheme are based on 548 children and 5,480 sq.m. of play space. Excluding the school, the scheme proposes 7,470 sq.m. of play space provision, and the requirements overall and by age category are met. Including the school, 10,374 sq.m. of play provision would be provided. Play provision would be distributed across the site, including within the public realm and residential courtyards. The scheme would comply with the requirements set out in London Plan Policy S4.</p>	<p>In responding to comments from the Health and Safety Executive and the LBRuT, there has been changes resulting in a reduction of 14 residential units across the site.</p> <p>This has led to a minor reduction in the child population yield, which has then led to a change in the amount of playspace required to be provided at the site. Gillespies' Landscape DAS Addendum (page 14) sets this out. The actual provision of playspace proposed is unchanged, and therefore there has been an increase in the overprovision of playspace at the site.</p>
Design, layout, public realm and landscaping	<p>Policies D1-D3 and D8 of the London Plan and the Mayor's Housing SPG apply to the design and layout of development and set out a range of urban design principles relating to the quality of public realm, the provision of convenient, welcoming and legible movement routes and the importance of designing out crime by optimising the permeability of sites, maximising the provision of active frontages and minimising inactive frontages.</p>	Noted

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	<p>The overall layout, public realm and landscaping of the scheme is broadly the same as in the previous application which was determined by the Mayor in 2021. The proposed layout and quality of public realm is in line with the principles and objectives set out in the Stag Brewery Planning Brief SPD and the design policies set out above in terms of creating a well-integrated, legible network of streets and public open spaces which are well-activated with mixed uses and stitch the site back into the surrounding area, linking the River to Mortlake Green.</p>	Noted
Residential quality (para 72-74)	<p>The scheme proposes 50% single aspect units. The vast majority of single aspect homes are east and west facing. However, the revised scheme includes 4% north facing single aspect units. This is a reduction compared to the scheme which was considered by the Mayor at the GLA Representation Hearing. The single aspect units would generally be one or two-bedroom apartments with shallow plans and generous frontages. Mansion blocks are articulated to provide bay windows to enable 'enhanced' single aspect with multiple glazed facades facing different directions.</p>	Noted
	<p>The majority of residential units will meet or exceed the minimum requirement for private outdoor amenity spaces through a mixed provision of ground floor terraces, balconies and external roof terraces. Instances where private amenity space is not achieved are largely limited to residential units situated in the Maltings Building, where heritage considerations have made the installation of external balconies undesirable. This is acceptable given the heritage constraints which prohibit adding balconies to this building. The quantum of internal space within these dwellings would exceed the minimum internal standard so compensates for this.</p>	Noted
	<p>Distances between the blocks range from approximately 30 metres to more narrow spaces ranging from 13.5 metres to 10 metres. Privacy and overlooking issues have been minimised through the design, location and orientation of glazing and bedrooms, living rooms and balconies. However, further detailed mitigation measures are required via conditions and in terms of the detailed design.</p>	Noted

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Heritage (75-78)	<p>Whilst the redistributed massing of the scheme has reduced the impact on the setting of a number of the heritage assets in key views from the River, GLA officers consider that the application would still result in less than substantial harm to the significance of heritage assets as a result of the following impacts:</p> <ul style="list-style-type: none"> <li>• Loss of some historic fabric in the Maltings Building resulting from works necessary for its adaptation from industrial to community and residential uses;</li> <li>• Loss of some historic building fabric in the Former Hotel and Former Bottling Plant;</li> <li>• Demolition of the majority of former brick boundary walls;</li> <li>• Harm to the significance of the Mortlake Conservation Area owing to impact on setting from height and massing and to the setting of the Maltings Building when viewed from Chiswick Bridge and Chiswick Bank;</li> <li>• Harm to the significance of the Grade II listed residential properties situated on Thames Bank between Ship Lane and Chiswick Bridge, including Thames Cottage, Tudor Lodge, Thames Bank House, Leydon House and Riverside House owing to impact on setting from the proposed height and massing of the scheme;</li> <li>• Harm to the significance of the Mortlake Conservation Area and Mortlake Green Conservation Area and the Former Bottling Building and Former Hotel Building owing to the impact of the proposed development on the setting of these heritage assets setting impact when viewed from the south.</li> </ul> <p>The scheme would provide the following heritage benefits:</p> <ul style="list-style-type: none"> <li>• The adaptation and re-use of the Maltings Building with ongoing viable uses (including community facilities).</li> <li>• The restoration of the most significant facades of the Former Hotel and Former Bottling Plant buildings, and their incorporation within the new development.</li> </ul>	<p>Please see paragraphs 37 and 38 of the Townscape Briefing Note, prepared by Montagu Evans, dated 9 August 2022.</p> <p>Please see paragraphs 39-42 of the Townscape Briefing Note, prepared by Montagu Evans, dated 9 August 2022.</p>

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	<ul style="list-style-type: none"> <li>• Use of the retained portions of the Former Hotel Building in a newly proposed hotel, returning the historic use to the site.</li> <li>• Retention and re-use of heritage features within the site including the existing brewery gates and memorial plaques.</li> </ul>	
	<p>In accordance with the NPPF, incidences of ‘less than substantial harm’ should be weighed against the public benefits of the proposal, including heritage related public benefits. Considerable weight and importance must be attached to the harm caused by the proposals to surrounding heritage assets in any balancing exercise. As the application would harm heritage assets, the proposals conflict with London Plan Policy HC1.</p>	<p>Please see paragraphs 43-46 of the Townscape Briefing Note, prepared by Montagu Evans, dated 9 August 2022.</p>
	<p>When considering the previous planning application in 2021 in the GLA’s Stage 3 Representation Hearing Report, GLA officers set out a number of public benefits which weighed in favour of the scheme, as set out in paragraph 701 of the Representation Hearing Report. Weight was given to the provision of additional housing and affordable housing across the site which, at that time, comprised 28% affordable housing by unit / 30% by habitable room (127 low cost rent homes and 148 intermediate homes). However, in this application only 15% affordable housing by unit (17% by habitable room) is proposed which would comprise 33 low cost rent homes and 134 intermediate homes. As a result, GLA officers consider that significantly less weight can now be given to the provision of affordable housing on the scheme as a public benefit. The extent to which the public benefits can be given weight in the balancing exercise can only be determined at Stage 2.</p>	<p>Noted</p>
<p>Density and Design Review (79)</p>	<p>GLA officers understand that design reviews have been undertaken on the revised application at pre-application stage. The Design Review Panel (DRP) was generally supportive of the underlying urban design and masterplanning principles for the site and the redistribution of the height and massing, except for the proposed height increase to Block 10 which the Panel considered would have a dominant effect on the retained historic bottling building. The DRP also expressed concerns</p>	<p>The design of Building 10 has been amended to remove a typical storey.</p> <p>The updated design is explained in greater detail in the DAS Addendum, prepared by Squires. Please also refer to the updated drawing schedule, dated 21 July 2022, for the final set of drawings for Building 10.</p>

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	regarding a number of issues including the number of single aspect and north facing single aspect units; privacy and overlooking distances between habitable rooms; the site's urban greening factor score; and the architectural approach proposed for mansion blocks and warehouse apartment buildings which did not have enough detail and richness.	With respect to the other matters raised by the DRP prior to submission, these are considered within the application (see paragraphs 13.23 and 13.25 of the submitted Town Planning Statement, prepared by Gerald Eve LLP, dated March 2022).
Height, massing and tall buildings (80-86)	London Plan Policy D9 seeks to ensure that there is a plan-led approach to the development of tall buildings across London and that the visual, functional, environmental and cumulative impacts of tall buildings is appropriately considered to avoid adverse or detrimental impacts.	Noted
	Part B of Policy D9 states that boroughs should determine which locations are appropriate for tall buildings (subject to meeting the other requirements of the Plan) and states that tall buildings should only be developed in these suitable locations.	Noted
	Part C of Policy D9 sets out qualitative criteria for assessing the visual, functional, environmental and cumulative impacts and design quality of tall buildings. Tall buildings should achieve exemplary architectural and materials quality and should contribute positively to the character of the area, aid legibility and wayfinding and have a positive impact on the public realm. Tall buildings should avoid harm to heritage assets and should not adversely affect local or strategic views. Environmental impacts including wind, microclimate, daylight/sunlight, glare impacts should be assessed. Cumulative visual, function and environmental impacts should also be assessed. Development near the River Thames, particularly in the Thames Policy Area, should protect and enhance the open quality of the river and the riverside public realm, including views, and not contribute to a canyon effect along the river.	Noted
	In terms of the local planning policy context, Policy LP2 of Richmond's Local Plan defines tall buildings as those of 18 metres (six storeys) in height or taller. The policy also defines 'taller' buildings as those significantly taller than the neighbouring buildings, but less than 18 metres in height. The Local Plan identifies Mortlake Brewery as being one of a select few specific and exceptional sites outside Richmond and	Noted

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	Twickenham centres, where 'tall' and 'taller' buildings may be appropriate in principle.	
	The Stag Brewery Planning Brief SPD (2011) envisages building heights on the site ranging from 3 to 7-storeys with 3, 4 and 5-storey buildings to the west of the site closest to the playfields and nearby residential properties. To the east of Ship Lane a range of heights up to 6 to 7-storeys are expected. In general, the SPD states that taller buildings should be generally located at the core of the site and the height and scale should diminish towards the perimeter of the site or along the Riverside.	Noted
	<p>The proposed height and massing is shown below. The development would range in height between 3, 4, 5, 6, 7, 8 and 9-storeys. The previous scheme which was refused by the Mayor ranged in height from 3 to 10-storeys. Moving west to east across the scheme, the key changes compared to the refused scheme considered by the Mayor in 2021 are as followings:</p> <ul style="list-style-type: none"> <li>• Blocks 20 and 21 – reduction in height from 4 to 3-storey, with terraced homes now proposed instead of mansion blocks.</li> <li>• Block 19 – reduction of 6-storey element to 4 and 5-storeys and reduction of 7- storey element to 6-storeys</li> <li>• Block 15 – introduction of a 7-storey recess on the western side of the block adjacent to the school building.</li> <li>• Block 16 – reduction in height from 6 and 8-storeys in the refused scheme to 5 and 6-storeys in the revised scheme.</li> <li>• Block 03 – reduction in height from 7 to 6-storeys</li> <li>• Block 04 – reduction in height from 8 and 9 -storeys with a 10-storey pop-up element on the southern corner to 8-storeys with a 9-storey pop-up element in the revised scheme.</li> <li>• Block 07 – reduction in height from 9-storeys with a 10-storey pop-up element to 8-storeys with a 9-storey pop-up in the revised scheme.</li> </ul>	<p>Please note that in response to design comments received from LBRuT the following changes to building heights have been made:</p> <p>The top floor of B01 is now 14.3m and B10 is now 6 storeys with the top floor at 18.13m.</p> <p>This is set out in greater detail in the DAS Addendum, prepared by Squire &amp; Partners.</p>



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	<ul style="list-style-type: none"> <li>• Block 08 – reduction from 9-storeys to 9 and 8-storeys in the revised scheme.</li> <li>• Block 11 – reduction from 0-storeys to 8-storeys.</li> <li>• Block 12 – increase in the western side of the block from 7 to 8-storeys</li> <li>• Block 10 – increase in height from 5 to 6-storeys in the refused scheme to 6 to 7-storeys in the revised scheme.</li> <li>• Block 05 – reduction in height of part of the block to the west of Bottleworks Square from 5 to 4-storeys.</li> <li>• The height of the school building and Block 01 which comprises the cinema is unchanged.</li> </ul>	
	<p>In terms of London Plan Policy D9, the Council’s Local Plan envisages the potential for ‘tall’ and ‘taller’ buildings on the site. As such, the principle of tall and taller buildings on this site is in line with the locational requirements set out in Part B of London Plan Policy D9. The site allocation does not prescribe any maximum or minimum heights. However, it does state that any proposed development should have due regard to the adopted Planning Brief SPD (2011) which is a material consideration but not part of the Development Plan. At up to 9-storeys the proposed scheme would exceed the recommended heights set out in the Planning Brief SPD. In terms of the criteria set out in Part C of London Plan Policy D9, the scheme would still harm heritage assets and impact locally designated river views and the surrounding townscape. These and other environmental and residential amenity impacts should be fully considered by the Council in its Planning Committee Report, taking into account the conflict with the heights set out in the Planning Brief SPD.</p>	Noted
Fire Safety (87)	<p>A fire statement has been prepared by a third party suitably qualified assessor and submitted as part of the planning application, as required by London Plan Policy D12. This sets out the proposed approach in terms of building construction, means of escape, passive and active fire safety systems and access and facilities for fire fighting</p>	<p>Noted.</p> <p>An updated Fire Statement and an updated Gateway One form have been prepared by Hoare Lea and is submitted in response to the detailed consultation</p>

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	services. Sprinkler systems would be provided in all buildings and land uses. Further detailed fire statements would be provided and secured at Reserved Matters Stage. This information provided meets the requirements set out in London Plan Policy D12.	response received from the Health and Safety Executive (HSE), dated May 2022.
Inclusive Access (88)	The application would comply with the accessible housing standards in the London Plan Policy D7. This should be secured by condition. An inclusive design statement has been provided which details how the scheme would achieve a high quality of inclusive access throughout the land uses proposed and the detailed and outline elements.	Noted
Transport-Site Access (89 – 90)	The proposed vehicle access arrangements to the site are the same as was proposed in the previous application. Access to the eastern side of the site will be via Ship Lane and a new priority junction on Mortlake High Street immediately east of the entrance to the underground car park (opposite Vineyard Path). Access to the eastern side of the development will also be via Ship Lane with secondary access from Williams Lane. In addition, a new access road is proposed from Lower Richmond Road immediately east of the proposed school which connects to both Ship Lane and Williams Lane. Access to the school is also from this new road.	Noted
	Vehicular routing to the development site is limited by the presence of the River Thames to the north and the railway line to the south. Vehicles will predominately access the site via Lower Richmond Road/ Mortlake High Street from Chalkers Corner or from Sheen Lane via the A205 Upper Richmond Road.	
Healthy Streets	The proposed development will generate an increase in pedestrian and cycle trips to and from the site and the local area. The redevelopment of the site will see the creation of a new network of streets, which will significantly improve permeability and connectivity through the site. The vast majority of car parking is located at basement level, which would ensure streets are largely car free and pedestrians and cyclists have priority over other modes within the site.	Noted
	The proposals include a number of off-site improvements including new and improved zebra crossing facilities, a new signalised crossing	Stantec have investigated a scheme to include a signalised crossing on Clifford Avenue, located centrally

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	<p>facility on Lower Richmond Road near the school, and improvements to the existing signalized crossing on Lower Richmond Road. Whilst the improvements identified will contribute towards the Healthy Streets and Vision Zero approach, the Transport Assessment (TA) and Active Travel Zone assessment highlights a key pedestrian and cycle desire line from the north west corner of the site across the A316 Clifford Avenue towards Kew (including Kew Gardens underground station). There is currently no formal pedestrian/cycle crossing facility on Clifford Avenue north of Chalker's Corner. Given the uplift in pedestrian and cycle movement generated by the development, a formal signalised toucan crossing facility would be of direct benefit to this development. TfL will therefore seek a contribution to deliver a crossing at this location.</p>	<p>of both northbound and southbound bus stops and adjacent to the access leading to Williams Lane. A concept design for the crossing is shown on drawing number 38262-5520-29.</p> <p>The applicant could agree to a contribution at this location however it should be noted that this would directly affect viability and could impact the affordable house provision and would need to be agreed with LBRuT.</p>
	<p>Furthermore, the TA also highlights a key pedestrian / cycle desire line along the A316 Clifford Avenue towards Chiswick Bridge. The TA refers to the TfL Quietway along the A316, however this scheme was never implemented. As a result, the current widths of the shared footway/cycleway along the A316 Clifford Avenue are unlikely to meet current design guidance standard for the expected pedestrian and cycle volumes, as there have been changes to the guidance since the original application. TfL recommend the applicant reviews the shared footway cycle way between Chalker's Corner and Chiswick Bridge to ensure it meets current standards and if not develop proposals to bring it up to current design standard.</p>	<p>Noted, see response immediately above.</p>
	<p>To improve road safety and pedestrian and cycle facilities, TfL have designed several proposed improvements within the A205 Upper Richmond Road / Sheen Lane junction. As the development proposal will generate additional vehicle, cycle and pedestrian movements through this area, a financial contribution of £228,878 towards the implementation of this scheme should be secured in the s106 agreement.</p>	<p>Noted</p>
	<p>Subject to securing the above, these improvements will contribute to the Mayor's Healthy Streets agenda for encouraging active travel and</p>	<p>Noted</p>

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	<p>mode shift away from the private vehicle and therefore accord with London Plan Policy T2.</p> <p>A section 278 Agreement under the Highways Act 1980 is required to be secured for any works on the public highway. An updated Stage 1 Road Safety Audit will also be required for any changes to the public highway. The removal of TfL street trees requires agreement by TfL along compensation for the removed asset, this should be secured by condition.</p>	
Car Parking (97-99)	<p>A total of 516 car parking spaces are proposed on site, including 423 spaces for the residential uses. This equates to a car parking ratio of 0.39 spaces per unit. This represents a slight increase (16 spaces) compared to the called-in scheme. Most of the spaces are located within a basement car park. A further 15 spaces are proposed for the secondary school and 78 spaces for the non-residential uses on site. Whilst the proposed car parking for all uses is in accordance with London Plan Policy T6, it is not clear why the residential car parking provision has increased when compared to the called-in scheme given that the total number of units has reduced by 167. This should be clarified.</p>	<p>The increase in the number of parking spaces is related to the additional 16 townhouses that are proposed, which will have parking available off-street. The basement parking will remain the same size and deliver the same number of parking spaces.</p>
	<p>It is proposed that 20% of all car parking spaces will include active charging facilities with passive provision for all remaining spaces. This is acceptable. Residential disabled persons parking will be provided in accordance with London Plan policy, which requires provision for 3% of dwellings at the onset, with up to 10% provided should demand arise. 10% of the non-residential parking bays will be provided for disabled parking from the outset. An outline Car Parking Management Plan (CPMP) has been provided, the detailed CPMP should be secured by condition or via the s106 agreement.</p>	Noted
	<p>In order to prevent potential overspill car parking from the development, it is recommended that an extension of the existing CPZ's is considered to include all roads up to Chalker's Corner. It is recommended that all future residents are exempt from applying for</p>	Noted

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	car parking permits and for this to be secured through an appropriate legal planning restriction.	
Cycle Parking (100-101)	The applicant is proposing a total of 2,413 long-stay cycle parking spaces on site, and a further 284 short-stay spaces for all elements of the development. This is in accordance with London Plan policy T5. 25% of the long-stay spaces will be provided as Sheffield stands, and 5% of these will be able to accommodate larger cycle. All cycle parking, and the provision of shower and locker facilities for the non-residential elements should be secured by condition along with a requirement to ensure that all cycle parking is designed and laid out in accordance with the guidance contained in Chapter 8 of the London Cycling Design Standards (LCDS). A cycle hub for the non-residential uses is proposed within the basement car park. This should be secured by condition.	Noted
	The applicant has safeguarded an appropriate area of land that can be converted to cycle hire, should TfL's cycle hire network be extended to the site in the future, this should be secured in the s106 agreement	Noted
Trip Generation – Masterplan (102)	The applicant has used the same trip generation methodology used for the previous schemes. Given the date of the initial assessment, a sense check of the trip generation to ensure that it is using the most up to date survey sites and is still robust. The submitted methodology concludes that the revised development is likely to generate an additional 2,410 two-way person movements during the weekday morning peak (0800 to 0900), and approximately 1,983 two-way movements during the evening peak (1700 to 1800). Of these, it is predicted that There will be 328 two-way vehicle trips in the AM peak hour and 224 in the PM peak hour. This represents a slight increase (+2) in vehicle trips in the AM peak period and a slight reduction (-1) in the PM peak hour when compared to the called-in scheme. The majority of additional movements from the proposal are predicted to be public transport trips (1,012 two-way trips in the AM peak hour and 674 in the PM peak hour) and walking and cycling trips (977 two-way in the AM peak hour and 948 in the PM peak hour).	A sense check has been undertaken and the trip rates used are still the most up to date.

Topic	GLA Comment (20 June 2022)	Applicant Response (18 August 2022)
Trip Generation – School (103)	The secondary school trip generation assessment has not changed from the called-in scheme and remains fit for purpose	Noted
Highways impact (104-106)	<p>The development is expected to generate a net increase of 328 two-way vehicle trips in the AM peak hour and 224 during the PM peak hour, including delivery and serving trips. 152 of the predicted two-way vehicle trips are associated with the school in the AM peak hour and 23 in the PM peak hour.</p> <p>In order to test the impacts of the vehicle trips generated by the development, detailed traffic network and junction modelling was undertaken as part of the original application assessment. LINSIG modelling software was used to support the original planning application, and VISSIM microsimulation modelling software, with a cordon taken from TfL’s strategic models for forecast years, was used for the revised and called-in schemes. This modelling was undertaken using 2017 traffic flows, as the emerging COVID situation meant more recent traffic survey data were not able to be collected for the called-in scheme, and was assessed alongside bespoke analysis to understand the impact of issues such as the Hammersmith Bridge closure. However, since the restrictions associated with the collection of new data was lifted in May 2021, TfL strongly recommends the assessment of this development reverts to standard practises and established methodologies, using recent survey data and the latest forecast assumptions as required by TfL VISSIM Model Auditing Process (VMAP) standards. It should be noted that this may take several months to complete.</p>	<p>See response provided by Stantec in their Technical Note titled ‘Traffic Data Comparison’ (TN048), dated July 2022 (Appendix C).</p> <p>A Technical Note (TN048) (Appendix C) has been prepared which includes details of several traffic surveys that were undertaken on a neutral weekday in June 2022, avoiding rail strikes and roadworks. They were then compared to the original surveys undertaken in 2017, which indicated that there is a general decrease in vehicle movements through all junctions studied as part of the approved VMAP work undertaken in 2021 in both the AM and PM peak periods.</p> <p>As the junction modelling assessment undertaken as part of the GLA application were based on the 2017 higher flows, it can be concluded that a worst-case modelling assessment has already been undertaken to assess the impacts of the Stag Development.</p> <p>It is therefore considered that the previous modelling work should still be considered satisfactory and robust, therefore, no further junction modelling is proposed at this time. However, it is noted, that prior to implementation of the Chalkers Corner scheme as part of the TMAN application, the study area will be re-modelled with VISSIM and follow TfL’s VMAP process using updated traffic surveys at the time the application is raised.</p>

Topic	GLA Comment (20 June 2022)	Applicant Response (18 August 2022)
	Additional comments may be issued by TfL once the modelling has been updated with new traffic data. It is for the local highway authority to comment on the suitability of the assessment and impact to the local highway network.	See response provided by Stantec in their Technical Note titled 'Traffic Data Comparison' (TN048), dated July 2022 (Appendix C).
Bus Capacity (107-108)	There are seven bus routes within walking distance of the site: 419,190, 209, 355, R68, N22 and 969, although it is noted the 969 only operates twice a week. The proposed development is predicted to generate a total of 663 two-way bus trips in the AM peak and 260 two-way bus trips in the PM peak hour. The majority of the predicted bus trips are associated with the proposed secondary school (510 in the AM peak hour and 65 in the PM peak hour). TfL have re-assessed the uplift in demand based on current capacity and conclude that additional buses would still be required to accommodate the predicted level of demand generated by both the revised development and secondary school. The revised development would potentially require 2 additional return journeys in both the AM and PM peak hours; and a further 8 school services in the AM peak hour and 2 in the PM peak hour to accommodate secondary school demand.	Noted
	A financial contribution of £3,200,000 is required to be secured to enhance bus services for the revised development. Of this amount £2,555,000 is to enhance bus services for the proposed secondary school. The contribution should be secured by the s106 agreement.	Noted
Bus infrastructure (109-112)	In order to facilitate the proposed development along Lower Richmond Road and Mortlake High Street, the applicant is proposing alterations to some bus stop locations along this corridor. Whilst TfL agreed the principle of these changes in 2016, TfL would recommend that the applicant reconfirms the length and widths of each stop and stand to ensure they meet TfL's current standards and include tracking with a 12m single deck rigid bus to demonstrate that they are accessible. The applicant should also provide tracking for the Sheen Lane mini roundabout to demonstrate that buses can still circumnavigate this roundabout in order to turn from the westbound side of the high street onto the eastbound side to access the bus stands. The applicant should	See response provided by Stantec in their Technical Note titled 'Assessment of Bus Stops' Rev TN046, dated 01/07/2022 (Appendix D).

Topic	GLA Comment (20 June 2022)	Applicant Response (18 August 2022)
	also confirm that these stops and stands meet the TfL design standards for Accessible Bus Stops. The detailed design of these changes will still need to be agreed with TfL and this should be secured by condition or the s106 agreement.	
	During pre-application discussions for the original scheme, TfL were asked to investigate diverting route 209 to the Stag Brewery site. Whilst this was not considered to be a viable option, TfL did request that an area of land which can accommodate bus standing space for three vehicles and driver facilities should be safeguarded in the south west corner of the secondary school site to allow for future route extensions. It is noted that should TfL wish to utilise this land for the bus turning facility it would require a separate planning application.	Noted
	There is an existing bus stand on Mortlake High Street which accommodates standing for 3 buses. TfL would welcome discussions with the applicant as to whether there is an opportunity to deliver a bus driver facility to support these stands.	Noted
	The full cost to implement any changes to TfL's bus infrastructure must be met by the applicant.	Noted
Rail (113)	Mortlake Rail Station and the trains which serve it are operated by South Western Railway (SWR). It will be for Network Rail and SWT to comments on the potential impact of the development on Mortlake Rail Station, the train services which operate through it and the level crossing.	LBRuT confirmed on 28 June 2022 that Network Rail raised no objections, subject to the level crossing works.
Travel Plan (114-115)	Framework Site-Wide, Residential and School Travel Plans have been provided. The detailed Travel Plans should be secured, enforced, monitored and reviewed as part of the s106.	Noted
	As per the called-in scheme, TfL would recommend that in order to further encourage active travel and to ensure that the development achieves the strategic mode share targets (75% for walking, cycling and public transport) required for outer London, a monitor and manage approach is proposed during the phased buildout of the development. A Sustainable Travel Implementation Fund should be secured up to a capped value of £350,000. This will allow for the implementation of	It is not considered necessary to have the proposed Sustainable Travel Implementation Fund. The Applicant is in discussions with LBRuT re: financial contributions associated with s106 obligations.



Topic	GLA Comment (20 June 2022)	Applicant Response (18 August 2022)
	measures, to ensure mode share targets are met. This should be secured in the s106 agreement.	
Delivery and Servicing (116)	A Framework Delivery and Servicing Management Plan (DSMP) has been submitted in support of the application and will form the basis of the detailed DSMP, which should be secured by condition.	Noted
Construction Logistics	A Draft Construction Logistics Plan (CLP) has been submitted with the application and a detailed version should be secured by condition. Careful consideration of constructions routes and access will be required as part of the detailed plan to minimise disruption including impacts on bus operations and journey times. Where possible construction traffic will avoid peak hours.	Noted
Energy Strategy (118-122)	Application A is expected to achieve a 77% reduction in carbon dioxide emissions over and above Building Regulations compliant development on the residential element, with a 60% reduction in carbon emissions expected on the non-residential element. Energy efficiency (Be Lean) savings of 10% on the residential and 11% on the non-residential element are expected. The remaining reductions in carbon dioxide emissions would be generated by renewable (Be Green) infrastructure comprising Air Source Heat Pumps and solar panels.	Noted
	In terms of compliance against London Plan Policy SI2, the scheme falls short of achieving the zero carbon target. The overall level of carbon dioxide emissions reductions would meet the minimum on-site requirements set in the policy and in terms of on-site energy efficiency measures for the residential element. The energy efficiency savings on the non-residential element fall short of the 15% minimum target in the London Plan.	It is worth emphasising that, although the target is not currently demonstrated for all non-residential areas of the site (Development Area 1 specifically where the shortfall is ~3% compared to the target) all residential elements of the scheme are able to demonstrate that the Be Lean target of 10% reduction can be met as well as exceeding the policy target for a 35% reduction in CO2 emissions on-site, demonstrating an overall 73% reduction (the previous scheme with CHP got to 42% overall). To demonstrate that the project is committed to responding to all policies in full, we invite a condition that requires further assessment post-planning, but pre-commencement, with a report demonstrating that the policy can be met for non-residential areas.

Topic	GLA Comment (20 June 2022)	Applicant Response (18 August 2022)
	Turning to the school (Application B), the energy strategy would also incorporate Air Source Heat Pumps and energy efficiency measures. However, no solar panels are proposed which is disappointing, given that the roof layout indicates that there is additional space for solar PV. The energy efficiency savings would be 15%, with overall savings of 66%. This complies with the minimum on-site requirements but falls short of the zero carbon target.	In line with the policy, a minimum of 35% reduction must be demonstrated on site with remaining emissions to be offset via a one-off payment i.e. carbon offset payment. This approach has been presented within the strategy, therefore an approach to meet the zero-carbon target can be demonstrated.
	The energy strategy should be secured by planning obligation or condition. Carbon offset payments should also be secured. Whilst there are currently no opportunities currently to connect to an area wide District Heat Network in this location, the scheme should be future proofed to enable connection should this become possible over time.	Noted.
	London Plan Policy SI2 requires the energy performance of completed developments to be monitored, verified and reported following construction ('Be Seen'). This should be secured.	Noted.
WLC (123)	A Whole Life-cycle Carbon Assessment has been undertaken in accordance with the London Plan. This reviews the embodied carbon emissions associated with the proposed development, taking into account the materials quantities and loads, the operational energy consumption of the built scheme, with total emissions estimated and compared to the GLA benchmarks. The report outlines a range of opportunities which could be undertaken to reduce the carbon associated with the development at the more detailed design stage when materials are being selected and specified. This further review should be secured through a pre-commencement condition. A post-construction monitoring report should be secured by condition for each phase.	Noted.
Circular Economy (124)	A Circular Economy Statement has been submitted which outlines how circular economy principles will be incorporated in the design, construction and management of the proposed development, including through minimising materials use and the sourcing and specification of materials; minimising and designing out waste at various stages; and by promoting re-usability, adaptability, flexibility and longevity. This is	Noted.

Topic	GLA Comment (20 June 2022)	Applicant Response (18 August 2022)
	supported and complies with London Plan Policy SI7. Postconstruction reports are proposed by the applicant which would provide further details for each phase. This is acceptable and should be secured via a planning condition.	
Urban greening, trees and biodiversity (125-128)	Policy G5 of the London Plan requires new development to contribute towards urban greening. Policy G7 requires development proposals to ensure that, wherever possible, existing trees of value are retained and that the loss of trees as a result of development is mitigated through the provision of replacement trees of an adequate value. Policy G6 states that development proposals should manage the impact on biodiversity and aim to secure net biodiversity gain.	Noted.
	A range of urban greening methods are proposed as part of the applicant's landscape strategy. This includes amenity grassland, flower rich perennial, hedge tree and meadow planting areas, rain gardens and green roofs. The applicant has undertaken an Urban Greening Factor (UGF) assessment which demonstrates that the scheme would achieve an overall UGF score of 0.28 across the entire site. Application A would ensure 0.3 UGF score	Noted.
	The UGF score for the school (Application B) is 0.22. This falls considerably short of the 0.4 target in the London Plan. This is brought down by the 3-G sports pitch and MUGA which are counted as permeable surfaces for the purpose of the UGF assessment. The assessment is also not able to take into account the design detail of the school's green roof, as this has not yet been designed in the required level of detail. The applicant has also stated that the overall score is affected by hardlandscaped public squares within the proposed masterplan, at Maltings Plaza and Botlings Square, which are considered essential to enable events and markets. This was considered acceptable in the GLA's Stage 3 report and the details of the application have not changed in this respect, so the overall conclusion of GLA officers is the same on this application.	Noted.
	In terms of trees, the proposed scheme would result in the loss of 50 trees, including 2 Category A trees and 24 Category B trees as outlined	Noted.

Topic	GLA Comment (20 June 2022)	Applicant Response (18 August 2022)
	below. To mitigate this, the scheme proposes 402 new trees. The majority of the trees to be removed are within the heart of the site to the rear of residential homes along the Thames Bank to enable the construction of Blocks 18, 20 and 21 and adjacent to the existing Watney's Sports Ground where the new school would be located. The existing trees including the mature London Plane trees along Ship Lane would be retained, as would the mature trees along the Thames Path.	
Sustainable drainage and flood risk (129)	The site is located within Flood Zones 2 and 3 and is protected by the River Thames flood defences. The development would involve replacing and upgrading the flood defence wall which forms the north east boundary of the site with a new wall to 6.7 metres AOD. Flood risk would be managed and mitigated through raised levels, improved flood defence walls and evacuation routes. The surface water drainage strategy for the site comprises a variety of Sustainable Urban Drainage (SUDS) methods such as attenuation tanks, permeable paving, rain gardens, green/brown roofs and areas of permeable soft landscaping within the site. The approach to flood risk management and drainage mirrors the previous planning application which was considered acceptable by the Environment Agency, Richmond Council and GLA officers.	Noted, in line with LBRuT comments, runoff that discharges from the Site to the Thames Water sewer network has been further reduced to achieve the greenfield runoff rate.
Air quality (130-133)	London Plan Policy SI1 states that development proposals should not lead to further deterioration of existing poor air quality and should not create unacceptable risk of high levels of exposure to poor air quality. New development is expected to be at least air quality neutral, with EIA development required to provide an air quality positive statement outlining how local air quality can be improved. Development proposals within Air Quality Focus Areas such as this should demonstrate that design measures have been used to minimise exposure.	Noted.
	The entirety of the borough is covered by an Air Quality Management Area. In addition, Chalkers Corner / Clifford Avenue / A205 / Lower Richmond Road is one of 187 identified Air Quality Focus Areas in London that exceed the objective limits for NO2 and have high levels of	Noted.

Topic	GLA Comment (20 June 2022)	Applicant Response (18 August 2022)																	
	human exposure. The applicant's Air Quality Monitoring Report confirms that the UK objective levels for NO <sub>2</sub> are exceeded at Chalkers Corner, Clifford Avenue and along Lower Richmond Road but reduce within the site.																		
	The applicant's Air Quality Positive Statement outlines a range of measures in which impacts on local air quality would be minimised, including measures to mitigate and manage dust and emissions during demolition and construction; through the low carbon energy strategy which incorporates Air Source Heat Pumps, electric vehicle charging infrastructure and measures to limit and discourage car use, alongside highways works to Chalkers Corner to alleviate traffic congestion.	Noted.																	
	The applicant's Environmental Statement states that air quality modelling undertaken shows that the development would not give rise to a significant air quality effect that would adversely affect the occupants of existing buildings surrounding the site or future residential and school users within the development. However, from the assessments undertaken it is unclear whether or not the application as a whole would achieve air quality neutral standard in terms of building emissions and transport emissions and what mitigation measures are required. Mitigation measures in respect of air quality should be clarified.	<p>Appendix 10.2: Air Quality Neutral Calculations concludes the Development is considered to be 'Air Quality Neutral', with respect to building and transport emissions. The Development refers to the application as a whole.</p> <p>To ensure clarity – the Air Quality Neutral calculations have been re-calculated using the Air Quality Neutral Consultation draft, November 2021. Building emissions were discounted as the Development would not include new combustion plant.</p> <table border="1"> <thead> <tr> <th rowspan="2">Land Use</th> <th rowspan="2">GIA</th> <th colspan="2">Benchmark</th> <th rowspan="2">Development trips per annum</th> </tr> <tr> <th>Trip Rates Outer London</th> <th>TEB</th> </tr> </thead> <tbody> <tr> <td>Residential</td> <td>1085</td> <td>447</td> <td>484995</td> <td>452,965</td> </tr> <tr> <td>Office</td> <td>4547.0</td> <td>16</td> <td>72752</td> <td>143,810</td> </tr> </tbody> </table>	Land Use	GIA	Benchmark		Development trips per annum	Trip Rates Outer London	TEB	Residential	1085	447	484995	452,965	Office	4547.0	16	72752	143,810
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		<table border="1"> <tbody> <tr> <td>Flexible Use</td> <td>4839.0</td> <td>16</td> <td>77424</td> <td>111,690</td> </tr> <tr> <td>Hotel</td> <td>1765.0</td> <td>6.9</td> <td>12178.5</td> <td>5,110</td> </tr> <tr> <td>School D1 C-H</td> <td>9319.0</td> <td>44.4</td> <td>413763.6</td> <td>97,000</td> </tr> <tr> <td>Leisure (D2) A-D</td> <td>1606.0</td> <td>47.2</td> <td>75803.2</td> <td>59,860</td> </tr> <tr> <td></td> <td><b>23,161</b></td> <td></td> <td><b>1,136,916</b></td> <td><b>870,435</b></td> </tr> </tbody> </table> <p>As shown in the Table above, the 870,435 annual vehicle trips generated by the Development would be lower than the TEB of 1,136,916. As set out in the submitted ES, the Development is 'Air Quality Neutral' in relation to transport emissions. The changes to the methodology set out in the Air Quality Neutral Consultation draft, November 2021 result in no material change to these findings.</p>	Flexible Use	4839.0	16	77424	111,690	Hotel	1765.0	6.9	12178.5	5,110	School D1 C-H	9319.0	44.4	413763.6	97,000	Leisure (D2) A-D	1606.0	47.2	75803.2	59,860		<b>23,161</b>		<b>1,136,916</b>	<b>870,435</b>
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### Appendices

- A. 'Impact of reduction in basement on scheme viability', prepared by BNP Paribas, dated 28 July 2022.
- B. Townscape Briefing Note, prepared by Montagu Evans, dated 9 August 2022.
- C. Concept design for Clifford Avenue crossing, prepared by Stantec, drawing ref: 38262-5520-29.
- D. 'Traffic Data Comparison' (TN048), dated July 2022, prepared by Stantec.
- E. 'Assessment of Bus Stops' (TN046), dated 1 July 2022, prepared by Stantec.

**5. Accelar Response Tracker for Application A (ref.  
22/0900/OUT)**

Prepared by Hoare Lea

Dated 12th August 2022

(pages 159 – 178)

## Former Stag Brewery. Sustainability response.

Application name	Former Stag Brewery
Application number	22/0900/OUT
Proposal description	<p>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</p> <ul style="list-style-type: none"> <li>a. The erection of a single storey basement and buildings varying in height from 3 to 8 storeys</li> <li>b. Residential development</li> <li>c. Provision of on-site cycle, vehicle, and servicing parking</li> <li>d. Provision of public open space, amenity and play space and landscaping</li> <li>e. New pedestrian, vehicle and cycle accesses and internal routes, and associated highways works.</li> </ul>
Planning application link	<a href="https://www2.richmond.gov.uk/lbrplanning/Planning_CASENO.aspx?strCASENO=22/0900/OUT&amp;DocTypeID=7#docs">https://www2.richmond.gov.uk/lbrplanning/Planning_CASENO.aspx?strCASENO=22/0900/OUT&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
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"> <li>- 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.</li> </ul>	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"> <li>- 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</li> </ul>	The Checklist has been reviewed and will be resubmitted to support these responses. <ul style="list-style-type: none"> <li>- The end columns had been cropped off when the checklist was pdf'd. This has been corrected.</li> <li>- The scope has been amended to reflect the latest submission</li> </ul>



Policy	Extract from planning documentation	Reference	Accelar comments and recommendations	Applicant responses
<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 &amp; 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>

Policy	Extract from planning documentation	Reference	Accelar comments and recommendations	Applicant responses
			<p>Excellent has been achieved for the office, cinema, and retail spaces.</p> <ul style="list-style-type: none"> <li>- 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.</li> </ul>	
<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"> <li>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)</li> <li>2. achieve at least the BREEAM excellent standard for the 'Wat 01' water category or equivalent (commercial development)</li> <li>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.</li> </ol> <p>London Plan Policy SI5 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"> <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>2.5 credits are also targeted under Wat 01 in BREEAM 2014 Domestic refurb for The Maltings, and a water consumption level of &lt;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 SI5 of the London Plan. Planning conditions should capture:</p> <ul style="list-style-type: none"> <li>- Residential (for both Development Area 1 and Development Area 2): Prior to the</li> </ul>	<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"> <li>- 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.</li> <li>- 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.</li> </ul>	
<p>Development proposals should:</p> <ul style="list-style-type: none"> <li>- seek to improve the water environment and ensure that adequate wastewater infrastructure capacity is provided</li> <li>- take action to minimise the potential for misconnections between foul and surface water networks.</li> </ul> <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"> <li>- Confirmation relating to proportion of material quantities included relating to cost</li> <li>- Confirmation of third-party mechanisms</li> <li>- Confirmation that the assessment has or can be submitted to the Built Environment Carbon Database</li> <li>- Updated assessment summary results to align with new WLC benchmarks</li> <li>- Removal of assessment 2 (which the applicant is currently using in the WLC assessments submitted).</li> </ul> <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"> <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>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"> <li>- To increase the recycling and composting of municipal waste by 65% by 2030</li> <li>- To increase the recycling, composting and reuse of C&amp;I waste by 70% by 2020.</li> </ul>	<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&amp;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&amp;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"> <li>- General waste</li> <li>- Mixed paper, card and carton recycling bins</li> <li>- Mixed container recycling bins for plastic, tins, unbroken glass and aerosols.</li> </ul>		<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"> <li>1. how all materials arising from demolition and remediation works will be re-used and/or recycled</li> <li>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</li> <li>3. opportunities for managing as much waste as possible on site</li> <li>4. adequate and easily accessible storage space and collection systems to support recycling and re-use</li> <li>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</li> </ol>	<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"> <li>- estimated bill of materials details (should use same data as for Whole Life Cycle Carbon Assessment)</li> <li>- estimated recycling and waste reporting (there could be a useful link to the Site</li> </ul>	<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"> <li>- 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)</li> </ul> <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"> <li>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.</li> <li>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.</li> </ol>	<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"> <li>1. The Applicant supports the proposed condition, subject to review of wording agreed between the Applicant and the Local Authority.</li> <li>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.</li> </ol>



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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"> <li>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.</li> <li>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"> <li>a. the completion and adoption of the functional adaptation strategy study</li> <li>b. the completion and adoption of a sustainable procurement plan pertaining to the site.</li> </ol> </li> <li>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.</li> </ol>	<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"> <li>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.</li> <li>2. The recommendation of this condition is welcomed by the Applicant, subject to agreement of wording between the Applicant and LBRuT.</li> <li>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.</li> </ol>
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"> <li>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.</li> <li>2. Development proposals of 50 units or more, or new non-residential</li> </ol>	<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.</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>1. Excessive heat losses from the length of pipework</li> <li>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</li> </ol>	<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><b>CHP</b> 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><b>Centralised ASHP (Air Source Heat Pump)</b> 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>

Policy	Extract from planning documentation	Reference	Accelar comments and recommendations	Applicant responses
	<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 &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>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"> <li>1. be lean: use less energy and manage demand during operation</li> </ol>	<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.

Policy	Extract from planning documentation	Reference	Accelar comments and recommendations	Applicant responses									
<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"> <thead> <tr> <th>Energy Conversion Device</th> <th>CHP</th> <th>ASHP</th> </tr> </thead> <tbody> <tr> <td>Energy Type</td> <td>Natural Gas</td> <td>Electricity</td> </tr> <tr> <td>CO<sub>2</sub> Emissions per kWh Input</td> <td>0.18316</td> <td>0.21233</td> </tr> </tbody> </table>	Energy Conversion Device	CHP	ASHP	Energy Type	Natural Gas	Electricity	CO <sub>2</sub> Emissions per kWh Input	0.18316	0.21233	
Energy Conversion Device	CHP	ASHP											
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Policy	Extract from planning documentation	Reference	Accelar comments and recommendations	Applicant responses									
			<table border="1"> <tr> <td>Typical Conversion Efficiency to Useful Energy</td> <td>0.9</td> <td>4.0</td> </tr> <tr> <td>CO<sub>2</sub> 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"> <li>The "CO<sub>2</sub> 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</li> <li>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</li> <li>The CO<sub>2</sub> Emissions per kWh Useful Energy is calculated by dividing the "CO<sub>2</sub> Emissions per kWh Input" by the "Typical Conversion Efficiency to Useful Energy"</li> </ol> <p>From these assumptions and calculations it is estimated that the CO<sub>2</sub> 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 CO<sub>2</sub> 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 &amp; performance. It is stated that "suitable infrastructure" will be provided.</p>	Typical Conversion Efficiency to Useful Energy	0.9	4.0	CO <sub>2</sub> Emissions per kWh Useful Energy	0.2035	0.0531	% Emissions compared with CHP	100.0%	26.1%	
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CO <sub>2</sub> Emissions per kWh Useful Energy	0.2035	0.0531											
% Emissions compared with CHP	100.0%	26.1%											
			<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>									

Policy	Extract from planning documentation	Reference	Accelar comments and recommendations	Applicant responses
			<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"> <li>- Cash in lieu payments to the borough’s carbon offset fund, or</li> </ul>	<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"> <li>Off-site (offsetting) provided that an alternative proposal is identified, and delivery is certain.</li> </ul>			
<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>through a cash in lieu contribution to the borough's carbon offset fund, or</li> <li>off-site provided that an alternative proposal is identified and delivery is certain.</li> </ol> <p>London Plan Policy S12</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"> <li>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.</li> <li>Both Lean Calculations and Green Calculations Parts 1 to 6, 9, 11 &amp; 12 indicate "General Requirements Compliance" is a "Fail". This requires explanation.</li> <li>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?</li> </ul>	<ul style="list-style-type: none"> <li>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"> <li>DER (Lean) – 15.21</li> <li>DER (Green) – 10.64</li> </ul> </li> <li>As seen above, there is a considerable variance in improvement between calculations.</li> <li>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.</li> <li>The BRUKL reports for the non-domestic areas have been reissued alongside this response for ease of reference.</li> </ul>
<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>All new major residential developments (10 units or more) should achieve zero carbon standards in line with London Plan policy.</li> <li>All other new residential buildings should achieve a 35% reduction.</li> <li>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.</li> </ol> <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>



Policy	Extract from planning documentation	Reference	Accelar comments and recommendations	Applicant responses
<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"> <li>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"> <li>a. connect to local existing or planned heat networks</li> <li>b. use zero-emission or local secondary heat sources (in conjunction with heat pump, if required)</li> <li>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)</li> <li>d. use ultra-low NOx gas boilers</li> </ol> </li> <li>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</li> <li>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.</li> </ol> <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



Policy	Extract from planning documentation	Reference	Accelar comments and recommendations	Applicant responses
<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"> <li>1. reduce the amount of heat entering a building through orientation, shading,</li> </ol>	<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"> <li>a. Reduce solar heat gains</li> <li>b. Reduce internal heat gains</li> <li>c. Controllable ventilation, either occupant controlled natural ventilation or mechanical ventilation with heat recovery</li> </ol>	<p>No response required.</p>

Policy	Extract from planning documentation	Reference	Accelar comments and recommendations	Applicant responses
<p>high albedo materials, fenestration, insulation and the provision of green infrastructure</p> <ol style="list-style-type: none"> <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 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>	

**6. Accelar Response Tracker for Application B (ref.  
220902FUL)**

Prepared by Hoare Lea

Dated 18th August 2022

(pages 179 – 195)

## 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
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: – 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. – New non-residential buildings over 100sqm will be required to meet BREEAM 'Excellent' standard. – Proposals for change of use to residential will be required to meet BREEAM Domestic Refurbishment 'Excellent' standard (where feasible).  <i>London Borough of Richmond LP 22 (part 2 of the original policy covers water efficiency, this is included in the row below).</i>	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. – Office Units BREEAM score: 74.0%, 'Excellent' – Cinema BREEAM score: 71.4%, 'Excellent' – School BREEAM score: 72.3%, 'Excellent'  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."	Sustainability Statement, pages 30-32, 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.  The council should note that the applicant has not submitted a separate Sustainable Construction Checklist just for the school, rather it appears to be captured within the broader Checklist along with Development Area 1. It is therefore not possible to isolate the specific aspects of the Checklist that are specific to the school. If the council is comfortable with this approach, then please refer to Accelar's comments and feedback within the 22/0900/OUT application.  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. It is recommended that the applicant sets a	The application consists of a hybrid application hence the combination of responses for all areas of the site within one checklist. Should the council decide they would like a separate response be produced for the school, this can be provided upon request.  This is an acceptable approach, subject to suitable wording. To be closed out as part of a planning conditions/S106 obligation, as appropriate.

Policy	Extract from planning documentation	Reference	Accelar comments and recommendations	Applicant responses
			<p>BREEAM planning condition for the school, capturing:</p> <ul style="list-style-type: none"> <li>- 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.</li> </ul>	
<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"> <li>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)</li> <li>2. achieve at least the BREEAM excellent standard for the 'Wat 01' water category or equivalent (commercial development)</li> <li>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.</li> </ol> <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 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>2.5 credits are also targeted under Wat 01 in BREEAM 2014 Domestic refurb for The Maltings, and a water consumption level of &lt;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 rainwater harvesting would be further investigated at detailed design stage.</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>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"> <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>This is an acceptable approach, subject to suitable wording. To be closed out as part of a planning conditions/S106 obligation, as appropriate.</p>

Policy	Extract from planning documentation	Reference	Accelar comments and recommendations	Applicant responses
	<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. 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>Development proposals should:</p> <ul style="list-style-type: none"> <li>– seek to improve the water environment and ensure that adequate wastewater infrastructure capacity is provided</li> <li>– take action to minimise the potential for misconnections between foul and surface water networks.</li> </ul> <p>London Plan Policy S15</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 to ensure that any investigative or upgrade works can be carried out before development commences.</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>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. 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 school has been considered as part of the wider proposed development, therefore the same documentation (e.g., Foul Sewage and Utilities Assessment, Sustainability Statement) 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. Including:</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 design 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</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. 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>

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	<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>clarification on these matters and consults further expert advice as previously mentioned.</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 can vary between £2,000 and £35,000, with a report delivery time of up to 30 weeks</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>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>Full, detailed planning permission is being sought for the school. According to the Mayor's Whole Life-Cycle Carbon (WLC) Assessment's guidance, this requires that a detailed planning stage WLC assessment is completed. However, within the planning portal, it appears that only an outline planning stage WLC assessment has been submitted. It is unclear what the scope of this outline WLC assessment is. However, as it is outline, it does not meet the policy requirement for a detailed WLC assessment.</p> <p>Furthermore, consistent with Accelar's comments submitted with the 22/0900/OUT application, the WLC carbon assessment</p>	<p>Two WLC reporting tools were submitted as part of the application:</p> <ul style="list-style-type: none"> <li>- A tool to cover the detailed elements of the application</li> <li>- A tool to cover the outline elements of the application.</li> </ul> <p>The reporting tool has been updated and reissued (see comment below).</p> <p>The WLC results have been resubmitted within the newly adopted version of the tool</p>



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			<p>submitted is based on an outdated version of the GLA's Whole Life-Cycle Carbon Assessment (WLC) template. The most up to date version can be found on the Mayor's website here. As a result, key details are missing.</p> <p>It is recommended that the applicant submits a detailed Whole Life-Cycle Carbon Assessment (WLC), based on the Mayor's up to date template, for the school only. This will enable an appropriate comparison with the WLC benchmarks for schools, as set out within Appendix 2 of the Mayor's guidance document.</p>	<p>which supersede the versions of the tool that were submitted in March 2022.</p> <p>The details related to the school are included within one of the two submitted reporting tools for the detailed elements of the application. However, this has been updated to the latest version of the GLA reporting tool (see comment above).</p>
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"> <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>'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>It is noted that the Operational Waste Management Plan for the planning application 22/0900/OUT includes specific details on the waste management and recycling arrangements for the school development.</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.</p>
<p>B) Referable applications should promote circular economy outcomes and aim to be net</p>	<p>N/A</p>	<p>N/A</p>	<p>A separate CE statement is not required for this full application as the size of application</p>	<p>No response required</p>



Policy	Extract from planning documentation	Reference	Accelar comments and recommendations	Applicant responses
<p>zero- waste. A Circular Economy Statement should be submitted, to demonstrate:</p> <ol style="list-style-type: none"> <li>1. how all materials arising from demolition and remediation works will be re-used and/or recycled</li> <li>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</li> <li>3. opportunities for managing as much waste as possible on site</li> <li>4. adequate and easily accessible storage space and collection systems to support recycling and re-use</li> <li>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</li> <li>6. how performance will be monitored and reported.</li> </ol> <p>London Plan Policy SI7</p>			<p>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>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</p>	N/A	N/A	<p>The Richmond local plan does not include a policy to apply CE statement at the Borough level.</p>	No response required.
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"> <li>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.</li> <li>2. 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> </ol>	<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</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>1. Excessive heat losses from the length of pipework</li> <li>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</li> </ol> <p><u>CHP</u> In this revised application CHP has been removed from the specification and replaced</p>	<p>No action required.</p> <p>No action required.</p>

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<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>London Borough of Richmond LP 22</p>	<p>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>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>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., 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</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>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 and 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>	<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 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 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>
<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>	<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>8.1 Monitoring and Reporting.</p>	<p>"The Energy Statement sets out the schemes approach to the energy hierarchy in a clear way. Be Lean: The "Be Lean calculations were correctly undertaken on a site wide (Application A and B) basis.</p>	

Policy	Extract from planning documentation	Reference	Accelar comments and recommendations	Applicant responses
<p>1. be lean: use less energy and manage demand during operation                      2. be clean: exploit local energy resources (such as secondary heat) and supply energy efficiently and clean                      3. be green: maximise opportunities for renewable energy by producing, storing and using renewable energy on-site                      4. be seen: monitor, verify and report on energy performance.</p> <p>London Borough of Richmond LP 22 / London Plan Policy S12</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>8.2 Development Monitoring and Reporting Plan</p> <p>8.3 Operational cost: space heating and DHW.</p>	<p>However, the Energy Strategy for this application contains "Be Lean results" from the related the dwellings of Development Area 1 of Application A, i.e. not this application (Table 16 Page 18 of Energy Strategy).</p> <p>The requirement of 10% carbon emission reduction have been achieved for site-wide development.</p> <p>Passive design measures: Fenestration a balance has been achieved between solar heating in winter and overheating risk in summer</p> <p>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 70% for non-dwellings including the school</p> <p>Heating and Hot Water Heating and hot water are separately controlled with zonal programmable time settings and temperatures.</p>	<p>The BRUKL reports for the school at both Be Lean and Green stages were submitted along side the site wide application. These have been reissued for clarity.</p>
	<p>Too large to copy here but Outlines Renewables, Energy Storage etc</p>	<p>Table 19: Performance indicators for Be Seen</p>	<p>It is not clear if these controls include optimisation and compensation, i.e. variable start and end times on a "just in time" principle and heating flow temperatures based upon outside air temperature, as would be facilitated by a proper BEMS (Building Energy Management System).</p> <p>Heat Recovery Where windows cannot be opened mechanical ventilation with heat recover will be utilised. Overall for the "Be Lean" requirements, site-wide CO2 emissions have been reduced by 10.3% over the Part L requirements</p>	<p>The submitted energy strategy was produced to represent the approach for the Proposed Development as a whole, i.e., outline and detailed elements. As such, there are references to residential, office and hotel uses as well as the school.</p> <p>No response required.</p>

Policy	Extract from planning documentation	Reference	Accelar comments and recommendations	Applicant responses															
			<p>Be Clean: 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>Decentralised Energy Existing heat networks are approximately 2.3km to 5.4 km distant from this development and it would not be feasible to connect to them due to heat losses and lack of responsiveness due to the distance and the time it takes for the water to flow.</p> <p>Combined Heat and Power As mentioned, CHP would increase emissions above the proposed ASHP system and would require onsite combustion plant and associated local (flue or stack) emissions.</p> <p>Be Green: Be Green relates to the utilisation of Low and Zero Carbon technologies (LZC). An appraisal of LZT has been carried 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>Air Source Heat Pumps (ASHP) ASHP give zero emissions on site and much reduced emissions compared with the considered alternative of CHP:</p> <p>Emissions Comparison of ASHP with CHP</p> <table border="1"> <thead> <tr> <th>Energy conversion device</th> <th>CHP</th> <th>ASHP</th> </tr> </thead> <tbody> <tr> <td>Energy type</td> <td>Natural gas</td> <td>Electricity</td> </tr> <tr> <td>CO2 emissions / kWh input</td> <td>0.18316</td> <td>0.21233</td> </tr> <tr> <td>Typical conversion efficiency to useful energy</td> <td>0.9</td> <td>4.0</td> </tr> <tr> <td>CO2 emissions per</td> <td>0.235</td> <td>0.0531</td> </tr> </tbody> </table>	Energy conversion device	CHP	ASHP	Energy type	Natural gas	Electricity	CO2 emissions / kWh input	0.18316	0.21233	Typical conversion efficiency to useful energy	0.9	4.0	CO2 emissions per	0.235	0.0531	
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Policy	Extract from planning documentation	Reference	Accelar comments and recommendations	Applicant responses						
			<table border="1"> <tr> <td>kWh useful energy</td> <td></td> <td></td> </tr> <tr> <td>% emissions compared with CHP</td> <td>100%</td> <td>26.1%</td> </tr> </table> <p>           Notes:            1. 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            2. 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            3. 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”            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> <b>Air Source Heat Pumps</b>            The ASHP for both developments will be located in Development Area 1. As discussed, heat demand, heating and hot water, for this school development is supplied by ASHP, which is the best Be Green solution, minimising overall (including electricity power station) emissions and obviating any on site emissions.         </p> <p> <b>Photovoltaics</b>            The school has limited roof space due to plant, roof lights and a play area on the roof. Thus photovoltaics have not been proposed.         </p>	kWh useful energy			% emissions compared with CHP	100%	26.1%	
kWh useful energy										
% emissions compared with CHP	100%	26.1%								
			<p> <b>Be Seen:</b>            “Be Seen” is seeking a high standard and suggest continuous monitoring and analysis of energy consumption &amp; performance. It is stated that “suitable infrastructure” will be provided.         </p> <p>           Annual reporting on “energy intensity and carbon emissions” is required but the writer could not see reference to more frequent         </p>	<p>           The comments are welcome and will be considered further as the Be Seen strategy is developed at detailed design. However, the current stage of design (i.e. RIBA Stage 2) cannot respond to this comment at this time in full.         </p>						

Policy	Extract from planning documentation	Reference	Accelar comments and recommendations	Applicant responses
			<p>monitoring and analysis. Typically monitoring frequencies would be weekly or monthly. 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. 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. 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. Without normalising for outside air temperature, much of the monitoring analysis could be meaningless.</p>	
			<p>It is started that energy (kWh) will be measured for the outputs from the heating/cooling energy plant (note no cooling in this application for the School), from the heating production centre and that delivered to the customer. This suggests individual heat meters from each ASHP, from the ASHPO energy centre where the ASHP’s are located and the heat arriving at the occupied buildings, i.e. the school. As with the other application, there is no frequency of monitoring stated or how the monitoring data will be captured and analysed. Table 19 - “Delivered efficiency of each heating/ cooling) generation plant (%) - % of heat supplied from each heating/ cooling generation plant” also suggest measurement and analysis of the heat delivered by the heat pumps. This should be clarified</p>	<p>The comments are welcome and will be considered further as the Be Seen strategy is developed at detailed design. However, the current stage of design (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>	<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"> <li>- Cash in lieu payments to the borough's carbon offset fund, or</li> <li>- Off-site (offsetting) provided that an alternative proposal is identified, and delivery is certain.</li> </ul>			
<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 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"> <li>- 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.</li> <li>- Both Lean Calculations and Green Calculations Parts 1 to 6, 9, 11 &amp; 12 indicate "General Requirements Compliance" is a "Fail". This requires explanation.</li> <li>- 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?</li> </ul>	<ul style="list-style-type: none"> <li>- 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"> <li>- DER (Lean) - 15.21</li> <li>- DER (Green) - 10.64</li> </ul> </li> <li>- As seen above, there is a considerable variance in improvement between calculations.</li> <li>- 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.</li> <li>- The BRUKL reports for the non-domestic areas have been reissued alongside this response for ease of reference.</li> </ul>
<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. 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.</li> </ol>			<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.</p> <p>The tool has been completed using the detail of the SAP worksheets and BRUKL reports from the residential and non-residential areas respectively that have been submitted as a detail application within Applications 1 &amp; 2 to represent the site as a whole. Therefore, a separate tool has not been completed for the school in isolation. However, the BRUKL reports for the school have been reissued alongside this response for ease.</p>



Policy	Extract from planning documentation	Reference	Accelar comments and recommendations	Applicant responses
London Borough of Richmond LP 22				
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.  London Plan Policy SI2			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?	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.
Boroughs must establish and administer a carbon offset fund. Offset fund payments must be ring-fenced to implement projects that deliver carbon reductions. The operation of offset funds should be monitored and reported on annually.  London Plan Policy SI2	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.	No response required.
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  London Plan Policy SI3	N/A	N/A	This information was not readily available in the Energy Statement, can the applicant confirm where this is evidenced.	Correspondence was had as part of the previous submission of the development. (ref: MEM-2310513-5A-GJ-20181108-Responses to GLA-Rev C)
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	N/A. No local Heat Network Priority Area.	N/A	N/A. No local Heat Network Priority Area.	N/A

Policy	Extract from planning documentation	Reference	Accelar comments and recommendations	Applicant responses
<p>meet the 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 later.</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>N/A. No local Heat Network Priority Area.</p>	<p>N/A</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 below re overheating.</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>The Energy Strategy for the Schools development mainly cites overheating analysis that applies to the outline application.</p> <p>The GLA domestic overheating checklist has been completed (Table 34 Energy Strategy) but this is for domestic properties.</p> <p>Appendix D also has a room by room analysis, but this applies to bedrooms and living areas. Surely this TM59 analysis is for the other application?</p> <p>This may be not applicable to non-residential buildings.</p> <p>This is an area which requires clarification - what data and statements apply only to the outline application, only to full application or both applications.</p>	<p>The energy strategy report was produced to present the strategy for the site as a whole, therefore there will be reference to residential design and assessments as well as non-residential areas.</p> <p>CIBSE TM59 is the overheating risk assessment for dwellings, therefore is not applicable to non-residential dwellings.</p> <p>Regarding the residential areas, overheating risk analysis was undertaken for a sample of dwellings within the red line of the detailed application. Given this is a hybrid application, the assessment was to represent an approach</p>

Policy	Extract from planning documentation	Reference	Accelar comments and recommendations	Applicant responses
	<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>This make interpretation of the rationale and claims very difficult. Examples include,</p> <p>This requirement applies to the site wide overheating and both applications, however the cited evidence of Tables 13-15 only apply to dwellings, i.e. the other application. The cited Appendix C also states "A TM59 analysis of the dwellings and residential accommodation was also undertaken to assess the risk of overheating". Thus this also appears to apply only to the other application.</p> <p>Table 35 also applies to Residential Overheating Criteria.</p> <p>Internal Heat Gains Efficient lighting, insulated hot water pipework and energy efficient white goods have been cited as reducing internal heat gains.</p> <p>Page 9 An overheating An overheating risk assessment has been carried out on the proposals for Development Area 1, This is for the other dwellings application</p> <p>Overall it is not clear what the analysis for overheating at the school has been undertaken.</p>	<p>to dwellings within the outline submission as well (noting that a separate assessment would likely be carried out to support the reserved matters application).</p> <p>A BB101 assessment (thermal comfort assessment for schools) has been undertaken for the school based on the level of detail currently available. The results demonstrate that a proportion of the rooms could overheat based on the assumed parameters. However, passive measures such as the introduction of internal shading, glazing g-value, internal gains assumptions continue to be under review to develop a passive strategy, in line with the cooling hierarchy, to mitigate the risk of overheating in balance with potential impacts on energy demand and daylight provision within the classrooms. It is advised that a suitably worded planning condition be set for an updated BB101 assessment be undertaken and submitted to the council demonstrating overheating risk can be mitigated prior to commencement on site.</p>

## **7. Air Quality Response Tracker**

Prepared by Waterman IE

Dated August 2022

(pages 196 – 240)

# Stag Brewery, Mortlake - LBRuT Internal Consultee and Peer Review Responses



## Air Quality Responses

**Date:** August 2022

**Client Name:** Reselton Properties Limited

**Document Reference:** WIE18671-114-BN-1.2.5-AQ Response

This document has been prepared and checked in accordance with Waterman Group's IMS (BS EN ISO 9001: 2015, BS EN ISO 14001: 2015 and BS EN ISO 45001:2018)

Issue	Prepared by	Checked & Approved by
01	Andrew Fowler Associate Director 	Steve Brindle Associate Director 

## 1. Introduction

1. Further to the issue of the Air Quality Response (ref: WIE18671-114-BN-1.2.2-AQ Response) to the London Borough of Richmond upon Thames (LBRuT) air quality officer's comments on 29 June 2022, a peer review of the air quality assessment submitted to the support planning application was received from AQE Global (AQEG) on behalf of LBRuT on the 19<sup>th</sup> July 2022.
2. In order to address the points, set out in the Peer Review and the original LBRuT comments, this briefing note provides a combined response to all comments, in order that these are submitted in a comprehensive and legible manner.

## 2. Air Quality Neutral

### 2.1 Using current guidance (Air Quality Neutral Planning Support: GLA 80371, April 2014) and as reported in the ES air quality chapter submitted to support the planning application

#### LBRuT Original Comment

3. Consultant's assessment illustrates it is not air quality neutral for transport emissions and therefore substantial mitigation required or refusal.

#### Waterman Original Response

4. Appendix 10.2 Air Quality Neutral Calculations states:
5. *The Total Transport NO<sub>x</sub> Emission of 3,4414.4kg/annum (as shown in Table A4) is below the benchmark of 3,633.9/annum (as shown in Table A5) and the Total Transport PM<sub>10</sub> Emission of 586.2kg/annum (as shown in Table A4) is below the benchmark of 625.4kg/annum (as shown in Table A5).*

6. *The Development is therefore considered to be 'Air Quality Neutral', with respect to transport emissions, and no further mitigation measures are required.*
7. Therefore, the Proposed Development has been demonstrated to be Air Quality Neutral.

#### **AQEG Additional Comment**

8. *Appendix 10.2 Air Quality Neutral Calculations of the ES submitted to support the planning application, paragraph 10.2.12, clearly refers to the application of Air Quality Neutral Planning Support: GLA 80371, April 2014 guidance, to ascertain the air quality status of the proposed development. Using this guidance, and as reported in the Executive summary of this report, namely Tables 1.1 to 1.3, the guidance was incorrectly applied, and the proposed development is not air quality neutral. The benchmarks were compared with the incorrectly calculated proposed development emissions – this is clearly evidenced in Tables 1.1 to 1.3 above.*
9. *ES Chapter on Air Quality Neutral Table A3: 'Air Quality Neutral' Emissions Benchmarks for Transport footnote clearly indicates that, quote "No Emissions Benchmark for Use Classes A2, A3, A4, D1 and D2. Use Class B1 was used for a worst-case". Therefore, the calculated benchmarks per land use A2, A3, A4, D1 and D2 using B1 as a proxy for each of them, should had been compared with the proposed development real emissions equally for A2, A3, A4, D1 and D2 equally using B1 as a proxy for each of them, for worst case. Any deviation from such comparison between comparable entities is flawed. The report compared benchmarks of B1 against an average of land use A1 and B1 which is incorrect (which is comparing pears and apples). This is evidenced in Table A5: Calculation of the Benchmarked Transport Emissions for each Land-Use Category footnote which clearly states, quote "Flexible Uses - No Emissions Benchmark for Use Classes A2, A3, A4, D1 and D2. An average of the A1 and B1 was used for a worst-case assessment. Such comparison is meaningless as is comparing a benchmark value of B1 with something different (average A1 and B1) and therefore incorrect reporting, with the proposed development not being air quality neutral. The applicant fails to recognise this and reiterates the reported figures in Appendix 10.2 Air Quality Neutral Calculations of the ES submitted to support the planning application as correct which is unacceptable.*

#### **Waterman Additional Response**

10. The air quality neutral calculations have been updated in accordance with the Air Quality Neutral Planning Support: GLA 80371, April 2014 guidance – presented in **Annex 1**.
11. For the flexible uses floorspace – an average of the A1 and B1 Land Use Classes were used for both the Transport Emission Benchmarks (TEBs) and average distance travelled by car per trip. The average of the A1 and B1 Land Use Classes was used as the flexible uses would predominantly be retail uses. The average of the A1 and B1 Land Use Classes also ensures the air quality neutral calculations present a reasonable worst case aligning with the EIA Regulations 2017, as amended.
12. The air quality neutral calculations within **Annex 1** shows the Development to be 'Air Quality Neutral', and no further mitigation measures are required. As a result there is no material change to the findings of the EIA presented in the ES, and therefore the ES remains robust and valid.

## 2.2 Using draft 2021 GLA guidance

### LBRuT Comment

13. An analysis of the air quality neutral calculations for the proposed development reported in the ES Chapter Air Quality Neutral have indicated an inappropriate methodology and assumption has been applied to the Flexible uses category. The applicant has not calculated the benchmarks correctly. Tables 1, 2 and 3 below indicate the nature of each land use under evaluation in this application in terms of air quality neutral status.
14. In calculating the transport benchmarks for this group, as no emissions benchmark for classes A2, A3, A4, D1 and D2 are available, B1 use was applied as a proxy. However, when calculating the proposed development transport emissions, an average of the A1 and B1 uses was used. This is an erroneous approach given that two different entities are being compared (comparing Benchmark using B1 only with proposed development value using average of A1 and B1; this is comparing apples and pears).

Furthermore, the average of A1 and B1 is less conservative than B1. Once again, a conservative approach is required so that the appropriate level of mitigation is ascertained and suitable mitigation measures are agreed, deployed and monitored.

### Waterman Original Response

15. To ensure clarity – the Air Quality Neutral calculations have been re-calculated using the Air Quality Neutral Consultation draft, November 2021.

Land Use	GIA	Benchmark		Development trips per annum
		Trip Rates Outer London	TEB	
Residential	1085	447	484995	452,965
Office	4547.0	16	72752	143,810
Flexible Use	4839.0	16	77424	111,690
Hotel	1765.0	6.9	12178.5	5,110
School D1 C-H	9319.0	44.4	413763.6	97,000
Leisure (D2) A-D	1606.0	47.2	75803.2	59,860
	<b>23,161</b>		<b>1,136,916</b>	<b>870,435</b>

16. As shown in the Table above, the 870,435 annual vehicle trips generated by the Development would be lower than the TEB of 1,136,916.
17. As demonstrated in the submitted ES, the Development is therefore 'Air Quality Neutral' in relation to transport emissions.

### AQEG Additional Comment

18. *The applicant does not address the issue reported in the LBRuT Air Quality observations in terms of having incorrectly applied the still not revoked 2014 Air Quality Neutral guidance as reported in the ES Chapter Air Quality Neutral and instead offers a recalculation of the Air Quality Neutral status of the proposed development using GLA's 2021 draft guidance. Not sure how that offers clarity. In any case, during the consultation period, Outer London Local Authorities have contested*



*some of the benchmarks being proposed by GLA, including benchmarks for residential, hotels and leisure land use as being highly permissible and having suggested PTAL of proposed development to be used instead of a fixed value across the entire area, regardless of public transport facilities. Therefore, such benchmarks are not agreed to yet and cannot be used to derive air quality status at this stage.*

19. *Further, even if the proposed benchmarks under consultation would be applied, the comparisons are to be undertaken on a land use by land use basis. As per LBRuT observations, different land use classes require different mitigation strategies and air quality neutral is to be calculated per class, not aggregated as the applicant's approach. I have highlighted in red both the benchmarks that were contested by Outer London Local Authorities and the classes for which, using the draft guidance, the proposed development is not air quality neutral for. In any instance, as LBRuT has more stringent requirements for sensitive areas and guidance 2014 (which is stricter) is to be applied until the draft guidance is published taking into account all consultation responses.*
20. *As it stands, as per Air Quality Neutral Planning Support: GLA 80371, April 2014 current published guidance (and as used in Appendix 10.2 Air Quality Neutral Calculations of the ES submitted to support the planning application), when the proposed development emissions per land use class are correctly calculated and compared, the proposed development is not air quality neutral and suitable mitigation is required to achieve the appropriate level of air quality neutral. Such calculations are to be undertaken as listed in the Executive summary of this report and in consultation with LBRuT.*

#### **Waterman Additional Response**

21. As per the previous comment, the air quality neutral calculations have been updated in accordance with the Air Quality Neutral Planning Support: GLA 80371, April 2014 guidance, please refer to Annex 1.
22. As the Air Quality Neutral Planning Support: GLA 80371, April 2014 guidance were used for the updated calculations, no further comment is required on the use of the Air Quality Neutral Consultation draft, November 2021 guidance.
23. The air quality neutral calculations within Annex 1 shows the Development (both Applications A and B) to be 'Air Quality Neutral', and no further mitigation measures are required.

### **3. Damage cost and mitigation measures**

#### **LBRuT Comment**

24. Current LAQM measures not sufficient to reduce air pollution.
25. Specific land use classes will require specific mitigation and therefore tailored mitigation is to be devised and deployed. Where this is not practical or desirable, pollutant off-setting will be applied.
26. The level of mitigation required associated with the operation phase of the proposed development was calculated using Defra's Damage Cost Approach<sup>1</sup> over the estimated lifetime of the proposed development. The approach applied in using total emissions in this instance takes into account the fact that the area is highly polluted and that no additional emissions are acceptable (given the need to safeguard human health in the area the current situation is unacceptable and needs improvement).
27. The level of total emissions associated with the operation of the proposed development (taking traffic emissions into account only) equates to a mitigation level required of £2,618,642. – To deliver its air quality local action plan and or implement specific measures on/along the road



network affected by the proposal that reduce vehicle emissions and or reduces human exposure to nitrogen dioxide and particulate matter levels aiming at safeguarding human health.

28. To make the proposal air quality neutral (but still not air quality positive as sought by the London Plan) would be £415,604. Therefore, to make the proposed development acceptable, a Section 106 (S106) contribution is to be secured of a value to be agreed between £415,604 and £2,618,642.

#### **Waterman Original Response**

29. As above, the Development is 'Air Quality Neutral' and in accordance with the Air Quality Neutral Consultation draft, November 2021, off-setting payments (in addition to payments agreed previously) are not required.

#### **AQEG Additional Comment**

30. *Once again, the applicant does not address the issue. As per my comment above, current guidance (and as mentioned in Appendix 10.2 Air Quality Neutral Calculations of the ES submitted to support the planning application is to be applied) is to be used, not the draft version which was under consultation up to early this year and which clean approved version has not been published yet, addressing the consultation outcomes. As mentioned above, LBRuT has offered a consultation response challenging some of the benchmarks for Outer London as being highly permissive and not acceptable at locations where the PTAL is good. Therefore, according to GLA 80371, April 2014 (current published guidance), the proposed development is not air quality neutral, and an appropriate level of mitigation is required.*
31. *This is a material consideration, and the applicant must be advised to handle the matter suitably for compliance with the London Plan and LBRuT local policies*

#### **Waterman Additional Response**

32. As per the previous comments, the air quality neutral calculations have been updated in accordance with the Air Quality Neutral Planning Support: GLA 80371, April 2014 guidance, please refer to **Annex 1**.
33. The air quality neutral calculations within **Annex 1** shows the Development to be 'Air Quality Neutral', and no further mitigation measures are required. Off-setting payments (in addition to payments agreed previously) are not required.

## **4. Input data and assumptions**

### **4.1 Vehicle fleet composition turnover**

#### **LBRuT Comment**

34. Vehicle emissions used: a conservative approach should be applied in the assumption. It is standard practice to assume at least a couple of years delay in the fleet composition as defined in the Emission Factor Toolkit database to account for a lower vehicle fleet turnover rate (for instance, to predict ambient air concentrations for 2029, 2026 or 2027 vehicle emissions should had been used instead for a more realistic – and conservative approach).

#### **Waterman Original Response**

35. Using an incorrect year, such as 2026 or 2027 instead of 2029 (predicted opening year of the Development), for the fleet composition would be inaccurate and is not standard practice.

36. Air Quality Consultants published a report on Performance of Defra's Emission Factor Toolkit 2013-2019. The report concluded that recent analysis of recent NO<sub>x</sub> measurements provides evidence that vehicle controls are working, and as a result, the Emission Factor Toolkit (EFT) is reflecting the rate of observed reductions. Therefore, the Development has been tested in line with guidance.

#### **AQEG Additional Comment**

37. *The applicant does not address the point made and the comments offered are not accepted. It is actually standard practice (and an appropriate due diligence approach in sensitive areas which is clearly the case of the application site) across the air quality community of experts to offer a conservative approach and, in many cases, assessments even maintain emissions and backgrounds as per baseline year to offer a robust approach. The applicant just assumed that Defra's fleet renewal rates (which are based on optimistic projections and when compared with local fleet compositions are usually different) are real, not taking into account the points made by LBRuT of the need of both taking into account the realistic yearly delay in fleet composition turnover and the need to be conservative given the sensitivity of the area of the application site.*
38. *Further, the comment made in relation to the good match between real world NO<sub>x</sub> emissions and EFT's emission factors being used in the most recent version (v11.0) released by Defra is totally irrelevant to the point made by LBRuT. The issue is the fleet composition (fleet turnover rate) as opposed to vehicle emissions – two totally distinct matters. LBRuT's point (as further expanded in the Executive summary of this report) was made in relation to the area's fleet composition as being older than Defra's national projections in terms of the different Euro classes percentage contributions accounted for each year. The suggested delay in the fleet turnover for a couple of years is a very reasonable assumption and offers the required both more realistic and conservative approaches. As to being "real", this is the approach to be taken, as opposed to assuming a generic theoretical (and very often optimistic assumptions, specially taking into account the financial climate in the next few years ahead the UK economy is likely to be subject to) vehicle fleet composition based on non-realistic/conservative national projections.*

#### **Waterman Additional Response**

39. To account for LBRuT's fleet composition (older than Defra's national projections in terms of the different Euro classes percentage contributions accounted for each year), the 2029 'without Development' and 'with Development' scenarios were assessed with 2027 as the emission year – as requested by LBRuT.
40. Refer to **Annex 2: Updates to Air Quality Results, Traffic Data and Model Verification** for more information.
41. Using 2027 as the emissions year, and the impact descriptors outlined in *Table 6.3: Impact descriptors for individual receptors* of the EPUK / IAQM 'Land-Use Planning & Development Control: Planning for Air Quality' guidance, the Development is predicted to have a 'negligible' impact on NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> concentrations at all existing receptors. The predicted effects remain unchanged from those presented in the ES.

## **4.2 Background years used**

### **LBRuT Comment**

42. Background years used: the submission assumes pollution backgrounds are declining as per DEFRA's estimated declining rates overtime which are equally optimistic. Background levels should be conservative, and in line with earlier vehicle composition years of 2026 or 2027 (see above). To support the above, the baseline pollution levels reported in the ES Air Quality Chapter

are lower in comparison to the both the LBRuT monitoring results for 2019 and LAEI modelled results for the same year. Therefore, predictions made for the opening year pollution levels are also likely to be underestimated.

#### **Waterman Original Response**

43. As above using an incorrect year, such as 2026 or 2027 instead of 2029 (predicted opening year of the Development), for the fleet composition would be inaccurate and is not standard practice.
44. The monitored background concentrations at the Wetlands Centre Suburban monitor in 2019 (as  $21\mu\text{g}/\text{m}^3$  for annual mean  $\text{NO}_2$  and  $16\mu\text{g}/\text{m}^3$  for annual mean  $\text{PM}_{10}$ ) are lower than the Defra background maps. The Defra background maps were used for a conservative assessment.
45. Baseline pollution levels reported in ES were from LBRuT monitoring data as presented in Tables 10.11 & 10.12 in addition to the project specific air quality monitoring detailed in Table 10.13.
46. Therefore, the estimations are robust and are unlikely to be overestimated.

#### **AQEG Additional Comment**

47. *Comment not accepted, please see comments above. It is standard practice to offer a conservative approach in sensitive areas to secure a robust assessment of exposure in the opening year (and having confidence that predictions are not being underestimated) and not assume that backgrounds are declining at the Defra's predicted rates. Further, usage of higher backgrounds in the baseline year are not necessarily equivalent to conservative approaches; the inverse is often true – the higher the background value used, the lower the monitored traffic NOx emission contribution that is run through the NOx to NO2 calculator to inform the model verification and adjustment exercise. This will usually result in a much lower adjustment factor and therefore a less conservative set of predicted results in the opening year. However, please note that LBRuT observation was made in reference to the opening year usage of backgrounds, not baseline; therefore, the applicant's comment "Baseline pollution levels reported in ES were from LBRuT monitoring data as presented in Tables 10.11 & 10.12 in addition to the project specific air quality monitoring detailed in Table 10.13" is irrelevant. The mention to the applicant's site specific monitored baseline pollution levels reported in the ES Air Quality Chapter as being lower in comparison to the both the LBRuT monitoring results for 2019 and LAEI modelled results for the same year was used by LBRuT to highlight the fact that predictions made for the opening year pollution levels by the applicant are very likely underestimated.*
48. *It is assumed that in the applicant's last statement where it reads "Therefore, the estimations are robust and are unlikely to be overestimated" was meant to read "Therefore, the estimations are robust and are unlikely to be underestimated" instead. In any case, by not being conservative with emissions and backgrounds (by using 2029 values as opposed to assuming a couple of years delay in reaching national projections), the assessment is most likely significantly underestimating exposure impacts in the opening year.*

#### **Waterman Additional Response**

49. As comment above, the 2029 'without Development' and 'with Development' scenarios were assessed with 2027 as the emission year – as requested by LBRuT.
50. Additionally, the model has been updated to include monitored 2019 background concentrations at the Wetlands Centre Suburban monitor – as requested by LBRuT.
51. The background  $\text{NO}_2$  and  $\text{PM}_{10}$  concentrations for the opening year at the Wetlands Centre Suburban monitor, assumed to be 2027, were predicted using Defra background maps. The ratio

reduction of Defra background maps from 2019 to 2027 were used to predict NO<sub>2</sub> and PM<sub>10</sub> 2027 concentrations.

52. Refer to **Annex 2: Updates to Air Quality Results, Traffic Data and Model Verification** for more information.

### 4.3 Monitoring results

#### LBRuT Comment

53. The monitoring results in Table 10.12 indicate that 9 of the 10 diffusion tube monitoring locations closest to the Site were at or exceeded the annual mean NO<sub>2</sub> objective of 40µg/m<sup>3</sup> between 2015 and 2019. However, eight of the nine diffusion tubes, where data is available, recorded a reduction in the monitored annual mean NO<sub>2</sub> concentration from 2018 to 2019. The annual mean NO<sub>2</sub> concentration at the other diffusion tube on Mortlake Road remained the same.
- This is in line with most of London but is not true here.
  - The most relevantly located diffusion tube – site 74 - near Chalker’s Corner increased from 50ug/m<sup>3</sup> up to 52ug/m<sup>3</sup> from 2018 to 2019, which is very unusual, bucking national and local trends; with distance correction for the residential façade, this measures 49.6ug/m<sup>3</sup>. This is high before moving the junction closer and highly significant for this development.
54. This LBRuT monitoring data is backed up by LAEI modelling data – see attached consultant’s report and maps.

#### Waterman Original Response

55. It is noted at the bottom of Table 10.12 in Chapter 10 Air Quality that LBRuT moved site 21 and 51 closer to Chalkers Corner junction in 2018. When Site 21 was moved it was renumbered 74. This explains why the concentrations increased from 50ug/m<sup>3</sup> up to 52ug/m<sup>3</sup> at Site 74 from 2018 to 2019. As site 21 (now 74) moved closer to Chalkers Corner junction changed it should not be used to demonstrate that annual mean NO<sub>2</sub> concentrations are increasing at this location.

#### AQEG Additional Comment

56. *The key point is that, with distance correction for the residential façade, monitoring value of site ID74 indicates an exposure value of 49.6ug/m<sup>3</sup>, well above the limit value to safeguard human health. Focus should be on that fact as it is people being exposed to hazardous levels of air pollution, and the need for the planning system secure safeguarding of public health.*
57. *Monitoring results in Table 10.12 indicate that 9 of the 10 diffusion tube monitoring locations closest to the Site were at or exceeded the annual mean NO<sub>2</sub> objective of 40µg/m<sup>3</sup> between 2015 and 2019, clearly indicating the sensitivity of the site.*

#### Waterman Additional Response

58. It is agreed that Chalker’s Corner is sensitive to air quality impacts. It also important to note that annual mean NO<sub>2</sub> concentrations are reducing, illustrated by a decrease from 2018 to 2019 at seven of the nine diffusion tubes. The only increase recorded was at diffusion tube site 21 (now 74), which was moved closer to the Chalkers Corner junction and therefore not an appropriate monitor to illustrate an increase in annual mean NO<sub>2</sub> concentrations.

## 5. Model verification and adjustment

### LBRuT Comment

59. It is noted that during consultation, the EHO at LBRuT requested that urban background concentrations from the Wetlands Centre, Barnes were used in the air quality assessment. However, background concentrations from Defra's predictions have been used instead. This is not supported; local measurements should have been used to ensure a robust assessment. Given that verification and adjustment is compared with and applied on modelled road NO<sub>x</sub> concentrations, the higher the background values used in the baseline year, the lower the traffic contributions derived and the lower the adjustment factor required, which, again, does not provide a conservative approach.

### Waterman Original Response

60. The monitored background concentrations at the Wetlands Centre Suburban monitor in 2019 (as 21µg/m<sup>3</sup> for annual mean NO<sub>2</sub> and 16µg/m<sup>3</sup> for annual mean PM<sub>10</sub>) are lower than the Defra background maps. The Defra background maps were used for a conservative assessment.

### AQEG Additional Comment

61. *The applicant did not address LBRuT's observation of the need to use local background data, which is recommended by Defra/GLA LAQM technical guidance. Further, the applicant does not have clarity on the meaning of a robust conservative assessment in terms of usage of background values. Please see response 2.3.3 above. The higher the background values used in the baseline year, the lower the monitored traffic contributions, and the lower the adjustment factor, with a likely (and often significant) underestimation of the impacts predicted in the opening year. As evidenced in Appendix A, this is the case in the assessment undertaken by the applicant.*
62. *Further, it is best practice (and as indicated by technical guidance) to use local background data as these reflect more realistic local conditions.*

### Waterman Additional Response

63. It is noted that, where appropriate, local background data should be used to reflect more realistic local conditions. However, it was considered the Wetlands Centre Suburban monitor located in Barnes was not realistic of local conditions at the Site. Despite this, the model has been updated to include background concentrations from the Wetlands Centre Suburban monitor – as requested by LBRuT.
64. Refer to Annex 2: Updates to Air Quality Results, Traffic Data and Model Verification for more information.

## 6. Emissions from additional transport

### 6.1 Additional Transport

#### LBRuT Comment

65. Additional transport emissions on roads and junctions, in particular at Chalkers Corner, already overcapacity, resulting in queueing, idling traffic for many hours of the day, not just at peak. This is particularly relevant with a failed TEB.
66. The Wetlands Centre Suburban monitor was not used as it was not considered representative of conditions of the site as the site is in a more urban environment. The use of Wetlands Centre Suburban monitor in 2019 would not alter the conclusions of Chapter 10 Air Quality.

### **Waterman Original Response**

67. As stated in Appendix 10.1: Air Quality Modelling Study vehicle speeds and queue lengths were taken into account. The following is stated:
- *To consider the presence of slow moving traffic near junctions, at roundabouts, the high level of congestion at the Chalkers Corner Junction; and vehicles idling at railway level crossings the following speeds have been used:*
  - *10kph at road links approaching junctions, Chalkers Corner Junction and the railway level crossings on Sheen Lane and White Hart Lane;*
  - *5kph at the Chalkers Corner Junction and the railway level crossings on Sheen Lane and White Hart Lane; and*
  - *at all other junctions a reduction of 10kph from the free-flowing speed.*
68. *Queue lengths at Chalkers Corner have been provided by Stantec to replicate the existing levels of congestion on the road network and to determine when to apply the above speeds.*
69. As detailed in Appendix 10.2 Air Quality Neutral Calculations states: *The Development does not exceed the transport emission benchmark (TEB).*

### **AQEG Additional Comment**

70. *Queueing and idling traffic for many hours of the day at certain locations is not suitably modelled by using 10km/h and/or 5km speeds in the model set up. Where severe capacity issues are observed, explicit modelling of queues in ADMS is required and should had been applied in this instance, given the significant congestion at Chalkers Corner.*
71. *Should explicit queueing in the model set up been accounted for, a better model verification would have been possible, with different adjustment factors at different locations (with distinct local conditions).*
72. *Given that explicit modelling of queueing conditions in the study area was not taken into account in the air quality assessment undertaken to support the planning application, predicted concentrations in the opening year are likely to be underestimated at locations where elevated emissions due to queueing are observed.*
73. *As evidenced in previous subsections of this report, the Development is not 'Air Quality Neutral' and appropriate mitigation is required.*

### **Waterman Additional Response**

74. As previously mentioned, queue lengths at Chalkers Corner were provided by Stantec to replicate the existing levels of congestion on the road network and to determine when to apply the above speeds. The approach to the speeds and congestion was agreed with LBRuT during a meeting of the 14<sup>th</sup> November 2017.
75. The speeds were looked at again and the A3003 Lower Richmond Road (Mortlake Green) and A3003 Lower Richmond Road (Watney's Sports Ground) road links were reduced to 10kph to account for congestion along Lower Richmond Road. No further clarification on what speeds LBRuT believe to be 'over optimistic' have been provided.
76. Explicit modelling of queues in ADMS was accounted for on all road links with an average speed of 5mph for three hours over both the AM and PM weekday peaks.



## 6.2 Vehicle Speeds

### LBRuT Comment

77. In the Stantec report, speed appears over optimistic which is likely to further under represent emissions. This needs reviewing.

### Waterman Original Response

78. Stantec have confirmed that there was no reference to speeds in any of their reports. Further clarification is required to understand which speeds LBRuT believe to be 'over optimistic' in the air quality report.

### AQEG Additional Comment

79. *The ES air quality chapter refers to Stantec as the provider of traffic data for the air quality calculations undertaken; it was assumed speed data used in the model set up was provided by the Transport consultants. Regardless of the source of traffic speed data (which should be confirmed for clarity), speed data appears over optimistic which is likely to further underrepresent emissions. These needs reviewing.*

### Waterman Additional Response

80. Again, the approach to the speeds and congestion was agreed with LBRuT during a meeting of the 14<sup>th</sup> November 2017.
81. For the purposes of the air quality assessment Stantec provided speeds for the traffic data. However, Stantec have confirmed speeds were not referenced in any Stantec report. No further clarification on what speeds LBRuT believe to be 'over optimistic' have been provided.

## 7. Questionable Monitoring Data

### LBRuT Comment

82. The 6 monthly monitoring data (deploying two NO<sub>2</sub> diffusion tubes at 10 monitoring sites), contained in a separate Waterman's document "Air Quality Monitoring Report" and on which significant reliance is placed, is questionable.

### Waterman Original Response

83. Comments addressed individually below within this section.

### LBRuT Comment

84. No information on the location of the monitoring sites used is provided.

### Waterman Original Response

85. Location of the monitoring sites provided below
- 1. Lower Richmond Road kerbside (519921, 175855)
  - 2. Chertsey Court metal railings roadside (519922, 175860)
  - 3. Chertsey Court Lower Richmond Road Façade (519921, 175870)
  - 4. Chalkers Corner Junction Kerbside (519874, 175862)
  - 5. Chertsey Court Carpark (519889, 175873)
  - 6. Clifford Avenue Kerbside (519893, 175913)
  - 7. Clifford Avenue metal railings roadside (519897, 175910)
  - 8. Chertsey Court Clifford Avenue façade (519907, 175904)

- School1. Stag Brewery Sports Club roadside (520268, 175881)
- School2. Stag Brewery Sports Club roadside (520260, 175881)

#### AQEG Additional Comment

86. With the provided Eastings and Northings (X,Y) information on the applicant's site-specific monitoring locations as above for the six months (from July 2018 to January 2019) monitoring survey, their mapping and analysis was possible. Figure 2.1 shows their location in relation to LBRuT official monitoring locations in the vicinity of the site. It is observed that applicant's Diffusion tube location 4 (Chalkers Corner Junction Kerbside) is in close proximity to LBRuT Site ID 74, with an annualised annual mean value of  $39.7\mu\text{g}/\text{m}^3$  which is significantly lower than the full annual mean value of  $52.9\mu\text{g}/\text{m}^3$  at ID74 location (George Street). The LAEI NO<sub>2</sub> annual mean mapping at the Diffusion tube 4 location registers an annual mean value of  $48.8\mu\text{g}/\text{m}^3$  which is a clear indication that the site-specific monitored values are significantly underestimating pollution levels in the study area at base line conditions.
87. The air quality modelled results of the ES Air Quality Chapter and Associated Appendices have included the use of applicant's site-specific monitoring locations DT1, DT2, DT4, DT6, DT7 and School 1 and School 2 in the model verification and adjustment exercises. Given that the short-term site-specific monitoring data is significantly lower than LBRuT and LAEI NO<sub>2</sub> annual mean concentrations for 2019, the model is not suitably adjusted.
88. Appendix A of this document reports the verification exercise using only robust full year 2019 LBRuT monitoring data, namely diffusion tubes DT74, DT51, DT52, DT18, and DT70. As it is usually the case, ADMS underpredicts concentrations by kerbside/roadside locations, and a suitable and robust adjustment factor of 1.44 is to be applied to the modelled results instead. This peer review verification exercise has produced an improved RMSE of  $\pm 3.2\mu\text{g}/\text{m}^3$ , which is within the acceptable guidance and an improvement from the applicant's reported  $\pm 4.0\mu\text{g}/\text{m}^3$  RMSE value (please note Table A11 extracted from Appendix 10.1: Air Quality Modelling Study does not offer units for the RMSE. For avoidance of doubt, it is  $\pm 10\%$  of the limit value under scrutiny (i.e.  $40\mu\text{g}/\text{m}^3$ ) which is equivalent to  $\pm 4.0\mu\text{g}/\text{m}^3$ . It is also noted a typo highlighted in yellow, it should read presumably adjusted instead. Model results with RMSE values above  $\pm 10\%$  of the limit value should be revisited, and input data and model set up questioned).
89. In addition, by using LBRuT monitoring data alone, both the Correlation Co-efficient and the Fractional bias are significantly improved, with achieved values of 1 and zero respectively.

Table A11: Statistical Calculations of Error for the Modelled Results

Statistical Calculation	Perfect Value	Acceptable Variable Tolerance	Unadjusted Model Score	Unadjusted Model Score
Correlation Coefficient	1	N/A	0.88	0.88
Fractional Bias	0	+2 to -2	0.06	0.19
Root Mean Square Error	0	$\pm 10$	4.4	4.0

90. Therefore, as mentioned in sections above, given a much lower adjustment value applied to the NO<sub>x</sub> road modelled results by the applicant (1.13, which is practically no adjustment at all), the predicted concentrations in the opening year are significantly underestimated.



### **Waterman Additional Response**

91. The model verification and adjustment exercises have been updated to exclude the site-specific monitoring locations DT1, DT2, DT4, DT6, DT7 and School 1 and School 2 diffusion tubes.
92. Please note the RMSE, Correlation Co-efficient and the Fractional bias, shown in Annex 2, are different from AQEG's working above as the traffic data has been updated to account for the Hammersmith Bridge closure – see LBRuT comment on Hammersmith Bridge closure below for further details.
93. Refer to **Annex 2: Updates to Air Quality Results, Traffic Data and Model Verification** for more information.

### **LBRuT Comment**

94. No tabulation of the eastings and northings nor mapping of locations were provided - Figure A1 is missing). Accurate location details (eastings/northings) are crucial to calculate exposure at the façade.

### **Waterman Response**

95. Please see response to 6.3 above for locations of the monitoring sites. Figure A1 should have been provided previously and is now provided.

### **AQEG Additional Comment**

96. *Noted.*

### **Waterman Additional Response**

97. No comment.

### **LBRuT Comment**

98. More recent, and complete monitoring information is available to ascertain the baseline conditions to the application site, as published by LBRuT in their ASR 2020, reporting data for 2019. It is noted that diffusion tubes ID 74 and ID 70 are located along the same road as the application site and report significantly higher values than the reported in the ES Chapter on air quality monitoring – this is also highlighted.

### **Waterman Original Response**

99. The 2019 LBRuT monitoring data (including diffusion tubes ID 74 and ID 70) has been detailed within the Baseline Conditions section of Chapter 10 Air Quality.

### **AQEG Additional Comment**

100. *The applicant's response does not address the point made. The key issue has been illustrated in paragraphs above and evidenced in Appendix A of this report. More recent, and complete monitoring information is available to ascertain the baseline conditions to the application site, as published by LBRuT in their ASR 2020, reporting full year data for 2019, which is more reliable and robust than the short-term annualised monitoring data collected by the applicant and included in the verification and adjustment exercise. By principle, and in the instance of available full year robust and official reported LBRuT 2019 data to suitably verify the modelled results, the short term site-specific data should have only been reported as informative, and not be included in the verification exercise given uncertainties associated with the annualization procedures and the fact*

*that it does not reflect 2019 ambient air quality conditions (referring to July 2018 to January 2019 instead).*

101. *The verification exercise is required to correct several model uncertainties associated with input data, meteorological representation, model set up parametrization, to mention a few. Including in the model verification uncertain monitoring data which had to be annualised, does not reflect ambient air conditions of 2019 and has much lower values than LBRuT and LAEI mapping for annual mean NO<sub>2</sub> values across the study area, counterfeits the purpose of the verification exercise. Further, two different datasets of monitoring data from two distinct sources were used in the model verification exercise, assuming identical data QA/QC procedures, handling of data, processing of blanks, etc. as well as assuming the quality of both datasets was similar which is certainly not the case. Furthermore, data collected by the applicant refers to a different time frame, including six months of 2018. This is not good practice, and the modelled results are not considered suitably adjusted as reported in the ES Air Quality Chapter and associated appendices*

#### **Waterman Additional Response**

102. As previous comment, the model verification and adjustment exercises have been updated to exclude the site-specific monitoring locations DT1, DT2, DT4, DT6, DT7 and School 1 and School 2 diffusion tubes.
103. Please note the RMSE, Correlation Co-efficient and the Fractional bias, shown in Annex 2, are different from AQEG's working above as the traffic data has been updated to account for the Hammersmith Bridge closure – see LBRuT comment on Hammersmith Bridge closure below for further details.
104. Refer to **Annex 2: Updates to Air Quality Results, Traffic Data and Model Verification** for more information.

#### **LBRuT Comment**

105. It is 6 months' data - not annual bias adjusted.

#### **Waterman Original Response**

106. The 6 month's monitoring results are bias adjusted and annualised. The bias adjustment and annualisation is provided in detail in Appendix 10.3 Air Quality Monitoring Report.

#### **AQEG Additional Comment**

107. *Noted.*

#### **Waterman Additional Response**

108. No comment.

#### **LBRuT Comment**

109. It focuses mainly on Chertsey Court.

#### **Waterman Original Response**

110. Agreed, the air quality monitoring was undertaken to:
- Determine NO<sub>2</sub> concentrations at the façade of Chertsey Court to determine relevant residential exposure to traffic emissions;
  - Ascertain whether NO<sub>2</sub> concentrations fall-off with distance from the roadside to the façade of Chertsey Court;
  - Evaluate the effect of the existing landscaping at Chertsey Court on traffic emissions and thus NO<sub>2</sub> concentrations; and

- Ascertain the baseline conditions for the proposed school.

111. The locations selected for the diffusion tube monitoring study were appropriate to ascertain NO<sub>2</sub> concentrations at Chertsey Court and the proposed school.

#### **AQEG Additional Comment**

112. *LBRuT is making a point, being that the impacts of the proposed development are wider than Chertsey Court, with the catchment area of the proposed development including other sensitive receptor locations around the congested junctions where additional monitoring information would be useful to complement the LBRuT 2019 monitoring dataset.*

113. *As indicated in Figure 2.21, the cluster of site-specific monitoring locations is excessive around Chertsey Court, where one or two worst case locations could had been selected and suffice and releasing other DTs to cover other sensitive areas likely to be affected by the proposed development, where sensitive receptors are likely to be exposed to values above the NO<sub>2</sub> annual limit value set to protect human health. The school is suitably covered by two diffusion tubes.*

#### **Waterman Additional Response**

114. As previous comments, the model verification and adjustment exercises have been updated to exclude the site-specific monitoring locations DT1, DT2, DT4, DT6, DT7 and School 1 and School 2 diffusion tubes.

115. Refer to **Annex 2: Updates to Air Quality Results, Traffic Data and Model Verification** for more information.

#### **LBRuT Comment**

116. It lacks accurate location details.

#### **Waterman Original Response**

117. Location details provided above in response to 6.11 and provided within Figure A1.

#### **AQEG Additional Comment**

118. *Noted.*

#### **Waterman Additional Response**

119. No comment.

#### **LBRuT Comment**

120. It is pre closure of Hammersmith bridge - not representative of the current and foreseeable future situation of increased/diverted traffic flow adding to roads already over capacity.

#### **Waterman Original Response**

121. The Hammersmith Bridge was closed in April 2019 - 2019 LBRuT monitoring data is therefore the most representative of air quality concentrations in the area following the closure of the bridge. 2019 LBRuT monitoring has also been detailed within Chapter 10 Air Quality.

#### **AQEG Additional Comment**

122. *The applicant does not address the issue in their response. The point is that 2019 LBRuT monitoring data is the most representative of air quality concentrations in the area following the closure of the bridge and the only dataset suitable to verify and adjust model predictions for future years. Monitoring data collected from the July 2018 to January 2019 (as discussed above) is not suitable to adjust a model referring to 2019 traffic conditions.*

123. *As mentioned above, the predicted NO<sub>2</sub> annual mean concentrations as reported in the ES Air Quality chapter are therefore unreliable.*

**Waterman Additional Response**

124. As previous comments, the model verification and adjustment exercises have been updated to exclude the site-specific monitoring locations DT1, DT2, DT4, DT6, DT7 and School 1 and School 2 diffusion tubes.

125. Refer to **Annex 2: Updates to Air Quality Results, Traffic Data and Model Verification** for more information.

126. In response to LBRUT's original comment, Stantec have provided traffic data to address the Hammersmith Bridge Closure. The updated traffic data shows a reduction in heavy duty vehicles on the local road network – Stantec have stated this reduction may be due to the introduction of the ultra-low emission zone and HGV's using alternative routes.

**LBRuT Comment**

127. This means it is less robust than the Council's ratified and bias adjusted annual data for 2019.

**Waterman Original Response**

128. 2019 LBRuT monitoring data has also been detailed within Chapter 10 Air Quality.

**AQEG Additional Comment**

129. *As above. The issue is not whether the applicant has reported 2019 monitoring LBRuT data or not within Chapter 10 Air Quality the but the reliance on the inclusion of monitoring data from a different time frame and (July 2018 to January 2019) in the verification exercise, which, together with the reasons listed above, is deemed unsuitable to verify and adjust a model referring to 2019 baseline conditions and which is required to robustly predict concentrations in the opening year.*

**Waterman Additional Response**

130. As previous comments, the model verification and adjustment exercises have been updated to exclude the site-specific monitoring locations DT1, DT2, DT4, DT6, DT7 and School 1 and School 2 diffusion tubes.

131. Refer to **Annex 2: Updates to Air Quality Results, Traffic Data and Model Verification** for more information.

**LBRuT Comment**

132. The report refers to 60ug/m<sup>3</sup>, the hourly target for residential facades - this is incorrect. For facades of residential property, schools, hospitals and care homes, it should be the annual mean of 40ug/m<sup>3</sup> – see LLAQM (TG16) (10).

**Waterman Original Response**

133. The reference in Paragraph 3.1 of the Air Quality Monitoring Report to 'annual mean NO<sub>2</sub> concentration of 60µg/m<sup>3</sup>' is a typographic error and should have referred to 'hourly mean NO<sub>2</sub> concentration of 60µg/m<sup>3</sup>'.

**AQEG Additional Comment**

134. *Noted.*

**Waterman Additional Response**

135. No comment.

### **LBRuT Comment**

136. Additional lane for a left hand turn on the opposite side of the road, on Lower Richmond Rd, reducing/removing the mini car park and cutting down 2 x mature trees, thereby moving the houses from 137 – 171 closer to the source and removing a useful, mature green buffer against pollution at this very busy junction. These residents are likely to be exposed to increased levels of pollution and the date of compliance is likely to be delayed, which is against London Plan 2021 SI1.  
“Development proposals should not: lead to further deterioration of existing poor air quality.... or delay the date at which compliance will be achieved in areas that are currently in exceedance of legal limits”

### **Waterman Original Response**

137. The NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> concentrations at all existing residential receptors are all predicted to be significantly below the UK air quality strategy (AQS) objectives in 2029 with the development in place.
138. The predicted concentrations in 2029 are predicted to be approximately half of the relevant AQS objectives.
139. With regard to London Plan 2021 Policy SI1, in 2029 the development would therefore not delay the date at which compliance will be achieved or lead to further deterioration of existing poor air quality.

### **AQEG Additional Comment**

140. *The applicant’s response does not address the issue pointed out by LBRuT. No receptor locations were modelled under the road network layout mentioned by LBRuT above, where the houses from 137 – 171 Lower Richmond Rd will be significantly closer to the source and removing a useful, mature green buffer against pollution at this very busy junction. Exposure in the opening year considering such close proximity of receptors to traffic emissions at worst case residential locations has not been accounted for in the EA Air Quality sections nor modelling exercises.*
141. *Further, the predicted concentrations in 2029 are not reliable and significantly underestimated as evidenced in paragraphs above and in Appendix A. In addition, the London Plan requires development to comply with PM<sub>2.5</sub> annual mean limit value of 10µg/m<sup>3</sup>, not 25µg/m<sup>3</sup> as reported by the applicant and mitigation is required as all the modelled receptors will be above this value set to safeguard human health.*

### **Waterman Additional Response**

142. Receptor 20 was incorrectly referenced in the ES Chapter but was modelled as 165 Lower Richmond Road. However, a further three receptors (129, 141 & 145 Lower Richmond Road) have been included as requested.
143. There is no standard or recognised methodology to predict the effectiveness of vegetation in reducing pollutant concentrations at sensitive receptors. The modelling exercise is therefore a worst-case assessment as it does not consider the existing or proposed vegetation.
144. With regard the predicted 2029 concentrations, as previous comments, the model has been updated and the 2029 ‘without Development’ and ‘with Development’ scenarios were assessed with 2027 as the emission year – as requested by LBRuT.
145. The London Plan makes no reference to the requirement of developments to comply with PM<sub>2.5</sub> annual mean limit value of 10µg/m<sup>3</sup>, Reference is however made to commitments to achieving

World Health Organisation (WHO) targets for Particulate Matter. The WHO provide interim targets and the achievement of reaching these interim targets should be considered a critical indicator of improving health conditions for populations. The Development would meet the Stage 3 of the interim target of 15µg/m<sup>3</sup>.

## 8. Air Quality Positive Observations

### LBRuT Comment

146. Significant additional work is required to agree suitable air quality positive measures - To date, no concrete suitable air quality positive measures have been specifically selected and proposed and negotiations with the LA need to take place to agree and secure a suitable list of air quality positive measures with an indication of how much emission reductions are expected to be achieved. It is noted that the air quality measures need to be above and beyond the measures that will be required to make the proposal air quality neutral.
147. The air quality positive statement does not meet the required LA objectives - too vague and generic - The Air Quality Positive Statement should be SMART (Specific, Measurable, Achievable, Realistic, and Timely).
148. LBRuT does not have sufficient information to ascertain either what exact measures are being proposed and where, when, and for how long nor the benefits expected associated with each of them.
149. A way to monitor their efficiency and adjust as and when necessary is also expected.

### Waterman Original Response

150. The Air Quality Positive Statement (AQPS) was prepared in line with the Air Quality Positive Draft Guidance.
151. The AQPS provides multiple suitable measures (Table A1) and summarises the expected benefits of these measures. The AQPS also provides an implementation plan (Table A2) to illustrate how these measures would be implemented.
152. As above, the Development is 'Air Quality Neutral'.
153. At the time of writing LBRuT have not published any air quality positive objectives. The latest available Air Quality Action Plan (2019-2024) available on LBRuT's website makes no reference to air quality positive.

### AQEG Additional Comment

154. *As evidenced earlier in this report, the proposed development is not air quality neutral. Therefore, prior to ascertaining appropriate air quality positive measures, measures to make the proposal compliant with the London Plan air quality neutral are required and must be separately listed and secured.*
155. *Once an agreement with regards to an appropriate level of air quality neutral mitigation is reached between the applicant and the LBRuT, further discussions and negotiations are required between the two parties to agree on a suitable and effective list of air quality positive measures. The air quality positive guidance is still in its draft form and therefore does not include feed back from Local Authorities on various aspects including quantification of the effectiveness of the measures proposed, monitoring of the improvements achieved on local air quality, consultation and liaison with Environmental Health officers, to mention a few.*



156. *Further, air quality positive measures will need to be above and beyond both air quality neutral measures and the default measures already required by the London Plan (e.g. electric vehicle charging, etc). Table A1: Air Quality Positive Matrix of Appendix 10.4: Air Quality Positive Statement content is a tick box exercise, listing fairly standard measures that would be done already by default anyway by the vast majority of planning applications of this size and location, not expanding on any of the listed measures by title with almost all the entries not requiring monitoring to ascertain any benefits claimed. This document must be significantly improved to meet the spirit of GLA's intention of an air positive development.*
157. *Finally, and as recommended by GLA during the consultation period of the draft Air Quality Positive guidance text, the Air Quality Positive document is meant to be dynamic and thoroughly consulted with the Local Authority in order to integrate its principles and measures with long terms strategic projects that may be part of the Borough's vision and opportunities to improve air quality and or measures already included in the Local Action Plan, so that any synergies can be explored and benefited from.*
158. *In conclusion, Appendix 10.4: Air Quality Positive Statement needs substantial additional effort by the applicant to positively engage with the LA and thoroughly agree and document details of suitable air quality positive measures and how this will be described in S106 agreements and monitored so that they are effective in their contribution to improve air quality. A list of well thought opportunities beyond the listed default standard measures must be discussed and agreed with the LBRuT.*
159. *To date, no air quality positive measures have been discussed nor consulted with the LA which needs to take place to agree and secure a suitable list of appropriate air quality positive measures with an indication of how much emission reductions are expected to be achieved, beyond the standard default measures listed.*
160. *Please note that an air quality positive approach is required by LBRuT's Air Quality SPD.*

### **Waterman Additional Response**

161. As above, the updated air quality neutral calculations within **Annex 1** shows the Development to be 'Air Quality Neutral', and no further mitigation measures are required. Air quality positive measures are therefore above and beyond the air quality neutral measures required. Off-setting payments (in addition to payments agreed previously) are not required.
162. Again, it is worth noting the Air Quality Positive Statement (AQPS) was prepared in line with the GLA's Air Quality Positive Draft Guidance. In the absence of published final guidance, the following comment is moot 'the air quality positive guidance is still in its draft form and therefore does not include feed back from Local Authorities on various aspects including quantification of the effectiveness of the measures proposed, monitoring of the improvements achieved on local air quality, consultation and liaison with Environmental Health officers, to mention a few is'.
163. The Air Quality Positive Consultation draft was published by the GLA in November 2021; however, it should be noted Waterman, the air quality consultants, have been integral to the design process from the beginning to maximise air quality benefits of the Development. Waterman have been involved in design team meeting regarding the design and have undertaken monitoring and modelling of numerous reconfigurations to the Chalkers Corner junction to alleviate the air quality, transport and traffic implications associated with the operation of the Development. It is therefore disputed the air quality measures are just default measures already required by the London Plan.

164. LBRuT were not directly consulted on air quality positive measures, due to time constraints from publication of the Air Quality Positive Draft Guidance to submission of the planning application. However, LBRuT have been consulted and provided input throughout the planning application process. LBRuT's Air Quality Supplementary Planning Document (SPD) and Air Quality Action Plan (AQAP) were reviewed when preparing the air quality positive statement, however neither made reference to any air quality positive measures.
165. The air positive guidance states that where specific measures are put in place to improve air quality, these should be secured through the use of planning conditions or s106 agreements. The air quality positive statement details this as mitigation for the majority of air quality measures listed. This enables LBRuT to ensure the air quality positive measures are effective in their contribution to improve air quality. It is not thought the air positive statement is the place to describe S106 agreements or details of monitoring – these should be secured or agreed by planning condition.

#### **LBRuT Comment**

166. A roadmap for air quality impacts, mitigation measures and air quality neutral and positive aspects should be reported distinctly for the detailed and the outline stages of the application. This will enable LBRuT to better ascertain where and when mitigation is required as well as the suitable level of effort to be deployed.

#### **Waterman Original Response**

167. An air quality neutral assessment and air quality positive will be submitted for every phase of the development. It is anticipated that a suitably worded planning condition will be attached to any permission to this end.

#### **AQEG Additional Comment**

168. *As mentioned above, the air quality positive statement as it is, is minimalist and does not go beyond the standard default measures that any sustainable proposed development would already propose and follow anyway. There will be no use of having similar documents being submitted at later stages, for each phase of the proposed development as there is no workable content to make the proposal air quality positive. As mentioned above, an engaged improvement of the document is required, working closely with the LA transport officers, EHO, public health, planners, LA landscape officers, etc. to brainstorm on possible opportunities to effectively and successfully produce an air quality positive proposal.*

#### **Waterman Additional Response**

169. As evidenced above, the air quality positive statement does go beyond the standard default measures. As above, LBRuT were not directly consulted on air quality positive measures, however, LBRuT have been consulted and provided input throughout the planning application process.

## **9. Size/massing**

#### **LBRuT Comment**

170. Current mitigation does not satisfy requirements of London Plan and LBRuT SPD. It needs to go further, either by reducing inputs - capacity/dwellings or reducing outputs – more/better incentives for modal shift/public transport or reduced road emissions.

#### **Waterman Original Response**

171. Not an air quality related comment. The travel plan provides incentives for modal shifts for sustainable and active travel.



#### **AQEG Additional Comment**

172. *This is clearly an air quality related comment. Transport management is part of appropriate air pollution mitigation in order to reduce pollutant emissions into the atmosphere. This is where the multidisciplinary approach between air quality consultants, transport consultants and the design team must be discussed and opportunities for better design and emission reduction strategies jointly explored. This is also linked with what is expected to happen during the production of the Air Quality positive statement, which is in reality to be based on a series of interactions and workshops involving all the relevant disciplines to see ways to optimise the proposal for air quality positive outcomes. I cannot therefore accept the applicant's dismissive response and the points raised by LBRuT must be suitably addressed.*

#### **Waterman Additional Response**

173. A multidisciplinary approach between the design team, stakeholders including TfL, air quality and transport consultants was successfully undertaken to ensure emissions were reduced wherever practicable. The results of the multidisciplinary approach are shown by the Development being air quality neutral and resulting in no significant adverse air quality effect on existing and future sensitive receptors as presented in Chapter 10 Air Quality of the ES.

#### **LBRuT Comment**

174. The river should be reconsidered – LBRuT has been in touch with the PLA. If neither are possible damage costs have been calculated.

#### **Waterman Original Response**

175. As set out in Chapter 6 of the ES, the use of the river for construction logistics was considered by the Applicant, however, at this stage significant constraints have been identified in respect of river use (refer to Chapter 4 of the ES which lists the constraints). On this basis river transport of construction materials is currently discounted. The FCMS submitted for planning provides an indicative strategy for construction logistics. A Construction Logistics Plan would be prepared upon appointment of the Principal Contractor. Recognition is given to traffic and pedestrian management, as well as the segregation of construction activities. The use of just-in-time deliveries would look to minimise material delivery waiting times and reduce congestion and pollution on local highways. The segregation of construction traffic and public vehicles would be maintained wherever possible and deliveries would be aimed for times avoiding traffic rush-hours.

#### **AQEG Additional Comment**

176. *This aspect must be thoroughly discussed and agreed with LBRuT. Depending on the outcome of the negotiations between the applicant and the LA, damage costs are to be inserted in a S106 agreement.*

#### **Waterman Additional Response**

177. No further air quality comment to what was provided above in Waterman's original response.

## 10. Conditions / HOTs (if objections can be overcome):

### LBRuT Comment

178. Car club bays: Must comply with LBRuT's Air Quality SPD s92, and include financial incentives/membership for 2 years.

### Waterman Original Response

179. Car club bays have been agreed as part of the travel plan whereby all residents would have membership. This will also form part of the S106 agreement.

### AQEG Additional Comment

180. *I strongly recommend the applicant's appointed air quality consultants are involved in the drafting of the Head of Terms as well as air quality related conditions. This will make sure there is an integrated approach and air quality aspects for achievement of air quality neutral and air quality positive status will be safeguarded and appropriately worded (which to date neither of them meet the expected standards; prerequisites should had been agreed at the pre-application stage and confirmed/consolidated at the air quality consultation stage with the EHO).*
181. *My professional perception is that the Air Quality Positive statement was a desk-based exercise where the appointed air quality consultants listed a series of standard measures, without the GLA's envisaged staged and dynamic process which would start before information is presented and discussed at the preapplication meeting, involving a series of optimized proposals/options and discussions where possible alternatives would be explored, negotiated between parties (LBRuT and the applicant) and agreed. And here we are, post submission stage, still unsure about compliance with crucial policy documents (regional and local) and how these prerequisites are to be woven into a S106 agreement.*

### Waterman Additional Response

182. As above, the air quality neutral calculations within **Annex 1** shows the Development to be 'Air Quality Neutral', and no further mitigation measures are required. Off-setting payments (in addition to payments agreed previously) are not required. The air quality positive measures are therefore above and beyond the air quality neutral measures required.
183. Please refer to Section 8 for Waterman's response to the Air Quality Positive Statement.

### LBRuT Comment

184. Robust travel and service plans, with measurable, reportable targets, will need careful conditioning.

### Waterman Original Response

185. Agreed.

### AQEG Additional Comment

186. *Ditto.*

### Waterman Additional Response

187. No further air quality comment to what was provided above in Waterman's original response.

### LBRuT Comment

188. Section 106 will be required – see report and maps attached.

#### **Waterman Original Response**

189. The Development is 'Air Quality Neutral' and in accordance with the Air Quality Neutral Consultation draft, November 2021 off-setting payments are not required.

#### **AQEG Additional Comment**

190. *As evidenced earlier in this report, the proposed development is not air quality neutral and off-setting payments are required. Damage cost calculations are to be undertaken using EFT v11.0 over the period of 30 years, using Defra's damage cost approach and toolkit.*

#### **Waterman Additional Response**

191. As above, the air quality neutral calculations within **Annex 1** shows the Development to be 'Air Quality Neutral', and no further mitigation measures are required. Off-setting payments (in addition to payments agreed previously) are not required. The air quality positive measures are therefore above and beyond the air quality neutral measures required. The Development is therefore compliant with the Air Quality Neutral Planning Support: GLA 80371, April 2014 guidance and does not require any mitigation or payment.

#### **LBRuT Comment**

192. Conditions:

- Low Emission Strategy
- Reducing emissions from demolition and construction

#### **Waterman Original Response**

193. No comment.

#### **AQEG Additional Comment**

194. *These conditions are the bare minimum; the delivery and implementation of an effective air quality positive approach may need additional conditions to secure their performance over the lifetime of the proposed development. An air quality positive delivery plan may also be required.*

#### **Waterman Additional Response**

195. No comment.

## **11. Conclusions**

196. This briefing note provides a further air quality modelling exercise which demonstrates that the air quality assessment undertaken and presented in the March 2022 ES remains valid, and that the Development is air quality neutral.

197. Additional modelling works have been undertaken to meet the requirement of LBRuT and their consultant. Waterman disagrees with a number of these requests and maintain they are outwith current good practice. Notwithstanding this, as set out above, the likely environmental effects remain insignificant as a result of the updated modelling.

## Annex 1: Air Quality Neutral Calculations

### Introduction

- 10.2.1 This Annex presents the calculations undertaken by Waterman Infrastructure & Environment Limited (Waterman) to demonstrate how the Development (LBRuT reference numbers: 22/0900/OUT and 22/0902/FUL) performs against relevant 'air quality neutral' benchmarks.
- 10.2.2 The air quality neutral calculations have been updated in response to comments presented in the 'Peer Review of the Air Quality Assessment Report Submitted to Support Planning Application 22/0900/OUT Phase 2', hereafter referred to as the 'Peer Review'. The Peer Review was undertaken by Air Quality Experts Global Ltd on behalf of the London Borough of Richmond upon Thames (LBRuT).

### Description of the Development

- 10.2.3 The Development is located within Outer London and would provide a mixed-use scheme. The total amount of floorspace proposed by the Development, relevant to the Air Quality Neutral Assessment criteria is set out below in **Table A1**.

Table A1: 'Air Quality Neutral' Emissions Benchmarks for Buildings

Land Use (Use Class)	Use Class		Proposed Floorspace Areas
	Pre- September 2020	Current	GIA (m <sup>2</sup> )
Residential	C3	C3	111,370
Office	B1	B1	4,468
Flexible Uses - Restaurant / bar / retail / community / leisure	A1 / A2 / A3 / A4 / B1 / D1 / Boathouse	A1 / A2 / A3 / A4 / B1 / D1 / Boathouse	4,784
Hotel	C1	C1	1,765
School	D1	D1	9,319
Cinema	D2	D2	1,606
<b>Total</b>			<b>133,312</b>

Note: Table 1 is not the Total Floor Space provided within the Development and excludes non-habitable uses such as plant and storage areas, play space, private amenity space, car park space, which are not used within the Air Quality Neutral Assessment calculations.  
The AQNA assessment requires the comparison of Development against relevant benchmarks for each use class and therefore it is necessary for them to be included in Table A1.

### Assumptions, Exclusions and Limitations

- 10.2.4 The Development does not propose combustion plant, it shall, therefore, not give rise to any significant adverse air quality impacts. The heating plant is therefore 'Air Quality Neutral' with respect to building emissions. As a result, building emissions have not been considered further within the air quality neutral assessment.
- 10.2.5 The Air Quality Neutral assessment has been based on the Greater London Authority's Sustainable Design and Guidance – Supplementary Planning Guidance (SPG) and Air Quality Consultants Air Quality Neutral Planning Support: GLA 80371, April 2014, referred to later in this appendix. These guidance documents apply an emission benchmark based on the Land Use Classes detailed in the Use Classes Order 1987 (as amended) in force at that time. However,

the most recent amendment of the Use Classes Order of 1<sup>st</sup> September 2020<sup>1</sup> resulted in a change to the list of Land Use Classes. However, for consistency with the guidance documents, the Land Use Classes referred to in this report reflect those in place prior to September 2020.

- 10.2.6 There are no Transport Emission Benchmarks (TEBs) for Use Classes C1, D1, and D2. The Air Quality Neutral Planning Support document states '*Where a specific TEB has not been calculated, it will be possible to show that a development would meet the benchmark if the scheme-generated trip rate for a particular land-use class does not exceed the benchmark trip rate, derived from TRAVL, as shown in Appendix A1*'. The C1, D1, and D2 benchmark trip rates were therefore derived from TRAVL as shown in Appendix A1 of the Air Quality Neutral Planning Support document.
- 10.2.7 The proposed floorspace areas for each use class are presently unknown for the 4,784m<sup>2</sup> GIA of flexible uses within the Development (Restaurant / bar / retail / community / leisure). An average of the A1 and B1 Land Use Classes were used for both the Transport Emission Benchmarks (TEBs) and average distance travelled by car per trip as the flexible uses would predominantly be retail uses. The average of the A1 and B1 Land Use Classes also ensures the air quality neutral calculations present a reasonable worst case aligning with the EIA Regulations 2017, as amended.

## Planning Policy

### The London Plan, March 2021

- 10.2.8 Policy SI1 Improving air quality of the Mayor of London's London Plan<sup>2</sup> states that:
- "...a) development proposals must be at least Air Quality Neutral..."*

### The Mayor's Air Quality Strategy 'Clearing the Air', 2010

- 10.2.9 Similarly, the Mayor's Air Quality Strategy<sup>3</sup> states that:
- "New developments in London shall as a minimum be 'air quality neutral' through the adoption of best practice in the management and mitigation of emissions".*

### Sustainable Design and Construction - Supplementary Planning Guidance, 2014

- 10.2.10 The Sustainable Design and Guidance – Supplementary Planning Guidance (SPG) provides updated guidance to support the implementation of the London Plan.
- 10.2.11 Further to Policy 7.14 of the London Plan, Section 4.3 of the SPG focusses on air pollution and the effects from the operation of new developments within Greater London. The SPG requires all new developments to be at least 'air quality neutral'.
- 10.2.12 Paragraph 4.3.15 of the SPG states:
- "This policy applies to all major developments in Greater London. Developers will have to calculate the NO<sub>x</sub> and / or PM<sub>10</sub> emissions from the buildings and transport elements of their developments and compare them to the benchmarks set out in Appendix 5 and 6."*

<sup>1</sup> <https://www.legislation.gov.uk/ukxi/1987/764/contents/made>

<sup>2</sup> Greater London Authority. 2021. The London Plan: The Spatial Development Strategy for Greater London, March 2021, GLA, London

<sup>3</sup> Greater London Authority (GLA), 'The Mayor's Air Quality Strategy: Cleaning London's Air', London, 2002.

10.2.13 The SPG presents emission benchmarks for buildings (associated with emissions from combustion plant introduced as part of a development to provide heating and power) and transport (associated with vehicle trips related to the operation of the development). It is considered that where a development does not exceed these benchmarks, it would be ‘air quality neutral’ and would not increase NO<sub>x</sub> (oxides of nitrogen) and PM<sub>10</sub> (particulate matter of 10µm diameter or less) emissions across London as a whole. A discussion on the Transport Emission Benchmarks (TEBs) as set out within the SPG is presented below.

10.2.14 Section 4.3.18 of the SPG notes that the design of a development should encourage and facilitate walking, cycling and the use of public transport, thereby minimising the generation of air pollutants.

10.2.15 As well as providing benchmarks the SPG also recommends emission standards for combustion plant to comply with, in addition to meeting the overall ‘air quality neutral’ benchmark

### Air Quality Neutral Planning Support: GLA 80371, April 2014

10.2.16 In April 2014, the GLA published the Air Quality Neutral Planning Support (AQNPS): GLA 80371<sup>4</sup> to provide support to the development of the Mayor’s policy related to ‘air quality neutral’ developments. The report provides a method to enable a development to be assessed against the air quality neutral benchmarks set out in the Sustainable Design and Construction SPG.

10.2.17 The report provides a methodology required to apply the air quality neutral policy. It requires the transport and building emissions for the development to be identified and then compared to the benchmark emissions. The report notes that the building and transport emissions should be calculated separately and not combined.

### Transport Emissions Benchmarks (TEBs)

10.2.18 Table 11 of the Air Quality Neutral Planning Support document sets out the TEBs defined by a series of land-use class for both NO<sub>x</sub> and PM<sub>10</sub>, presented in **Table A2**.

Table A2: ‘Air Quality Neutral’ Emissions Benchmarks for Transport

Land Use	London Central Activity Zone	Inner	Outer
NO <sub>x</sub> (g/dwelling/annum)			
Retail (A1)	169	219	249
Office (B1)	1.27	11.4	68.5
Residential (C3)	234	558	1553
PM <sub>10</sub> (g/dwelling/annum)			
Retail (A1)	29.3	39.3	42.9
Office (B1)	0.22	2.05	11.8
Residential (C3)	40.7	100	267

Note: No Emissions Benchmark for Use Classes A2, A3, A4, D1 and D2. Use Class B1 was used for a worst-case assessment

10.2.19 There are no TEBs for Use Classes C1, D1, and D2. The C1, D1, and D2 benchmark trip rates were therefore derived from TRAVL as shown in Appendix A1 of the Air Quality Neutral Planning

<sup>4</sup> Air Quality Consultants Environ Air Quality Neutral Planning Support: GLA 80371. April 2014

Support document. The Benchmark trip rates for Use Classes C1, D1 and D2 are presented in **Table A3**.

Table A3: 'Average Number of Trips per Annum for Different Development Categories

Land Use	Number of Trips (trips/m <sup>2</sup> /annum)		
	London Central Activity Zone	Inner	Outer
Hotel (C1)	1.9	5.0	6.9
School (D1)	0.07	65.1	46.1
Cinema (D2)	5.0	22.5	49.0

## Calculation of the Development Transport Emissions

10.2.20 Details of the trip generation per day for each land-use class have been provided by Stantec - the Applicant's transport consultant. The calculation of the Transport Emissions for residential, office and flexible uses of the Development are presented in **Table A4**.

Table A4: Calculation of the Benchmarked Transport Emissions for each Land-Use Category

Land Use	Trips per annum	Average Distance per trip	Distance travelled km/annum	Emission Factors (g/vehicle-km)	Transport Emission (kg/annum)	
					NO <sub>x</sub>	PM <sub>10</sub>
Residential	452,965	11.4	5,163,801	NO <sub>x</sub> : 0.353 PM <sub>10</sub> : 0.0606	1822.8	312.9
Office	143,810	10.8	1,553,148		548.3	94.1
Flexible Uses <sup>^</sup>	111,690	8.1	904,689		319.4	54.8
<b>Total Transport Emissions</b>					<b>2,690.4</b>	<b>461.9</b>

Notes: Average distance travelled by car per trip for sites within Outer London

<sup>^</sup>Flexible Uses - floorspace area for each use class and associated distances are presently unknown. An average distance derived from Use Classes A1 and B1 was used

\* School trips assumed for 200 days per annum

10.2.21 The Transport Benchmark for the Development, as shown in **Table A5**, are calculated by multiplying the benchmarks in **Table A2** by the number of residential units, and floorspace for office and flexible uses within the Development.

Table A5: Calculation of the Benchmarked Transport Emissions for each Land-Use Category

Land Use	Units	GIA (m <sup>2</sup> )	Transport Emission Benchmark		Benchmarked Emissions	
			gNO <sub>x</sub> /m <sup>2</sup> or dwelling/annum	gPM <sub>10</sub> /m <sup>2</sup> or dwelling/annum	kgNO <sub>x</sub> /annum	kgPM <sub>10</sub> /annum
Residential	1,071	-	1553	267	1,663	286.0
Office	-	4,468	68.5	11.8	306.1	52.7
Flexible Uses*	-	4,784	158.75	27.35	759.5	130.8
<b>Total Transport Emissions</b>					<b>2,728.8</b>	<b>469.5</b>

Notes: Average distance travelled by car per trip for sites within Outer London Activity Zone

<sup>^</sup>Flexible Uses - floorspace area for each use class and associated TEB's are presently unknown. An average TEB derived from Use Classes A1 and B1 was used



10.2.22 The Total Transport NOx Emission of 2,690.4 kg/annum (as shown in **Table A4**) is below the benchmark of 2,728.8 kg/annum (as shown in **Table A5**) and the Total Transport PM<sub>10</sub> Emission of 461.9 kg/annum (as shown in **Table A4**) is below the benchmark of 469.5 kg/annum (as shown in **Table A5**). The residential, office and flexible uses of the Development, combined, are 'Air Quality Neutral', with respect to transport emissions. and no further mitigation measures are required.

10.2.23 The calculation of the transport emissions for the hotel, school and cinema uses of the Development, as set out within the Air Quality Neutral planning support document, are presented in **Table A6**.

Table A6: Calculation of the Hotel, School and Cinema Transport Emissions

Land Use	Number of Trips (trips/m <sup>2</sup> /annum) Benchmark <sup>(a)</sup>	Trips per day	Trips per annum	GIA (m <sup>2</sup> )	Number of Trips (trips/m <sup>2</sup> /annum)
Hotel (C1)	6.9	14	5,110	1765	2.9
School (D1)	46.1	485	97,000	9,319	10.4
Cinema ( sui generis)	49	164	59,860	1,606	37.3

Note: <sup>(a)</sup> Number of Trips (trips/m<sup>2</sup>/annum) for sites within Outer London

<sup>(b)</sup> Emissions factors used as presented in Table 10 of the Air Quality Neutral Planning Support Document

10.2.24 **Table A6** shows the hotel, school and cinema trip rates are below the respective benchmark trip rates for each land use. As such, the hotel, school and cinema components of the Development are also considered to be 'Air Quality Neutral' in relation to transport emissions.

10.2.25 The Development is 'Air Quality Neutral', with respect to transport emissions, and no further mitigation measures are required.



## Annex 2: Updates to Air Quality Results, Traffic Data and Model Verification

### Updated Likely Significant Effects

#### Completed Development

##### *Changes in Local Air Quality from Traffic*

The Development is predicted to be completed and operational in 2029. To account for a lower vehicle fleet turnover rate than predicted by Defra in the Emission Factor Toolkit for 2029, LBRuT requested the opening year be assessed assuming a couple of years delay in the vehicle fleet turnover rate. The likely impacts on local air quality of the complete and operational Development were therefore assessed assuming the opening year of the Development was 2027 rather than 2029. Changes in local air quality would result from changes to traffic flows on the local road network and emissions from the basement car parks associated with the Development. The results of the ADMS-Roads modelling of operational traffic (based on the emission rates and background concentrations for the year 2027 – as requested by LBRuT) are presented in **Table 1**.

**Table 1** includes three additional receptors on Lower Richmond Road (Receptors 129, 141 & 145 Lower Richmond Road).

Table 1: Results of the Traffic Modelling at Select Sensitive Receptors

Receptor ID		NO <sub>2</sub> Annual Mean (µg/m <sup>3</sup> )				PM <sub>10</sub> Annual Mean (µg/m <sup>3</sup> )				PM <sub>10</sub> Number of Days >50µg/m <sup>3</sup>				PM <sub>2.5</sub> Annual Mean (µg/m <sup>3</sup> )			
		2019 Baseline	2029 as 2027 Without	2029 as 2027 With Development	2029 as 2027 Change	2019 Baseline	2029 as 2027 Without	2029 as 2027 With Development	2029 as 2027 Change	2019 Baseline	2029 as 2027 Without	2029 as 2027 With Development	2029 as 2027 Change	2019 Baseline	2029 as 2027 Without	2029 as 2027 With Development	2029 as 2027 Change
1	1 Varsity Row	27.2	19.4	19.7	0.3	17.3	16.7	16.8	0.1	0	0	0	0	12.1	11.0	11.1	0.1
2	6 Watney Cottages	35.3	23.4	23.9	0.4	17.9	16.5	16.6	0.1	1	0	0	0	13.0	11.9	12.0	0.1
3	1 Watney Cottages	33.1	20.9	21.3	0.4	17.5	16.2	16.3	0.1	1	0	0	0	12.8	11.7	11.8	0.1
4	1-3 Parliament Mews	23.5	17.3	17.5	0.2	16.4	15.1	15.2	0.1	0	0	0	0	11.5	10.6	10.6	0.0
5	Ship Lane	23.1	17.0	17.3	0.3	16.3	15.0	15.1	0.1	0	0	0	0	11.5	10.5	10.5	0.0
6	Lower Richmond Road	32.5	19.7	20.2	0.5	17.3	16.0	16.2	0.2	0	0	0	0	12.6	11.6	11.7	0.1
7	Lower Richmond Road	33.7	20.1	20.5	0.4	17.5	16.2	16.3	0.1	1	0	0	0	12.7	11.7	11.8	0.1
8	Lower Richmond Road	34.7	20.8	21.1	0.3	17.7	16.4	16.5	0.1	1	0	0	0	12.9	11.8	11.8	0.0
9	13 Sheen Lane	29.5	20.3	20.5	0.3	17.2	15.9	15.9	0.0	0	0	0	0	12.6	11.5	11.5	0.0
10	40 Mortlake High Street	34.4	22.4	22.7	0.3	18.4	17.1	17.2	0.1	1	0	0	0	13.3	12.2	12.2	0.0
11	Boat Race Court	34.6	22.5	22.8	0.3	18.5	17.2	17.3	0.1	1	0	0	0	13.3	12.2	12.3	0.1
12	My Sunshine Nursery	32.8	19.9	20.2	0.3	17.4	16.1	16.2	0.1	0	0	0	1	12.7	11.6	11.7	0.1
13	Thomas House Primary School	28.9	19.7	19.9	0.2	16.8	15.5	15.5	0.0	0	0	0	0	12.3	11.3	11.3	0.0
14	Barnes Children's Centre	30.5	19.9	20.2	0.2	17.2	15.9	15.9	0.0	0	0	0	0	12.6	11.5	11.5	0.0
15	St Mary Magdalen's Catholic Primary School	23.6	17.3	17.4	0.1	16.4	15.2	15.2	0.0	0	0	0	0	12.1	11.1	11.1	0.0
16	179 Lower Richmond Road	<b>45.8</b>	31.4	31.6	0.2	18.6	17.2	17.2	0.0	1	0	0	0	13.7	12.5	12.5	0.0

Receptor ID		NO <sub>2</sub> Annual Mean (µg/m <sup>3</sup> )				PM <sub>10</sub> Annual Mean (µg/m <sup>3</sup> )				PM <sub>10</sub> Number of Days >50µg/m <sup>3</sup>				PM <sub>2.5</sub> Annual Mean (µg/m <sup>3</sup> )			
		2019 Baseline	2029 as 2027 Without	2029 as 2027 With Development	2029 as 2027 Change	2019 Baseline	2029 as 2027 Without	2029 as 2027 With Development	2029 as 2027 Change	2019 Baseline	2029 as 2027 Without	2029 as 2027 With Development	2029 as 2027 Change	2019 Baseline	2029 as 2027 Without	2029 as 2027 With Development	2029 as 2027 Change
17	189 Lower Richmond Road	<b>42.1</b>	29.0	29.1	0.2	18.2	16.8	16.9	0.1	1	0	0	0	13.5	12.3	12.3	0.0
18	2 South Circular	<b>49.2</b>	33.7	33.9	0.1	19.0	17.6	17.6	0.0	2	1	1	0	14.0	12.7	12.8	0.1
19	67 Shalstone Road	<b>51.6</b>	35.4	35.5	0.1	19.2	17.8	17.9	0.1	2	1	1	0	14.1	12.9	12.9	0.0
20	165 Lower Richmond Road	<b>53.4</b>	36.4	36.7	0.3	19.6	18.2	18.2	0.0	2	1	1	0	14.4	13.1	13.1	0.0
21	83 Lower Richmond Road	34.0	23.1	23.5	0.4	17.7	16.3	16.4	0.1	1	0	0	0	12.9	11.8	11.8	0.0
22	1 Chertsey Court	33.7	22.9	23.2	0.4	17.6	16.3	16.3	0.0	1	0	0	0	13.1	12.0	12.0	0.0
23	23 Chertsey Court	32.6	22.4	22.7	0.3	17.5	16.1	16.2	0.1	1	0	0	0	12.8	11.7	11.7	0.0
24	139 Chertsey Court	35.9	24.2	24.4	0.2	18.0	16.6	16.7	0.1	1	0	0	0	13.3	12.2	12.2	0.0
25	77 Chertsey Court	34.5	23.5	23.6	0.1	17.8	16.4	16.5	0.1	1	0	0	0	12.5	11.3	11.3	0.0
26	145 Lower Richmond Road	<b>42.3</b>	28.8	<b>29.7</b>	0.9	18.2	16.9	17.0	0.1	1	0	0	0	13.5	12.3	12.4	0.1
27	141 Lower Richmond Road	<b>42.8</b>	29.0	<b>30.3</b>	1.2	18.3	16.9	17.1	0.2	1	0	0	0	13.5	12.4	12.5	0.1
28	129 Lower Richmond Road	<b>43.4</b>	29.3	<b>30.2</b>	0.9	18.3	17.0	17.1	0.1	1	0	0	0	13.6	12.4	12.5	0.1
29	Proposed Building 10 – Ground Floor Level	-	-	20.6	-	-	-	16.2	-	-	-	0	-	-	-	11.7	-
30	Proposed Building 5 – Ground Floor Level	-	-	26.9	-	-	-	17.7	-	-	-	1	-	-	-	12.6	-
31	Proposed Building 9 – Ground Floor Level	-	-	22.6	-	-	-	16.9	-	-	-	1	-	-	-	12.1	-
32	Proposed School – Ground Floor Level	-	-	19.4	-	-	-	15.5	-	-	-	0	-	-	-	11.3	-



Note: For accuracy, the changes arising from the Development have been calculated using the exact output from the ADMS-Road and ADMS model rather than the rounded numbers within the Table. This explains where there may a slight difference in the calculated change in concentrations from the 'without' and 'with' Development scenarios. Exceedences of the AQS objectives shown in **bold** text

### *Nitrogen Dioxide (NO<sub>2</sub>)*

The results in **Table 1** indicate that for 2019 the annual mean NO<sub>2</sub> objective is met at 20 of the 28 existing receptors. The highest concentration is predicted at Receptor 20 (53.4µg/m<sup>3</sup>). As discussed in **Appendix 10.1** of the March 2022 ES, the 1-hour mean AQS objective for NO<sub>2</sub> is unlikely to be exceeded at a roadside location where the annual mean NO<sub>2</sub> concentration is less than 60µg/m<sup>3</sup>. As shown in **Table 1**, the predicted annual mean NO<sub>2</sub> concentrations in 2019 are below 60µg/m<sup>3</sup> at all receptor locations. Accordingly, the 1-hour mean objective is likely to be met at these locations.

As previously mentioned, the likely impacts on local air quality of the complete and operational Development were assessed assuming the opening year of the Development was 2027 rather than 2029. In 2029, assumed to be 2027, both 'without' and 'with' the Development, concentrations are predicted to meet the NO<sub>2</sub> annual mean objective value at all receptor locations assessed. Therefore, the 1-hour mean objective is also predicted to be met at all existing receptor locations.

Using the impact descriptors outlined in **Table 10.10** of Chapter 10: Air Quality (of the March 2022 ES), the Development is predicted to result in 'slight' impact at Receptors 27 and 28 and a 'negligible' impact at all other 26 existing receptors assessed. In accordance with the EPUK / IAQM Guidance the overall significance is determined using professional judgement and not based on the impact of individual receptors. It is also considered the Development would have an 'negligible' impact on hourly NO<sub>2</sub> concentrations.

### *Particulate Matter (PM<sub>10</sub> and PM<sub>2.5</sub>)*

As shown in **Table 1**, the annual mean concentrations of PM<sub>10</sub> are predicted to be well below the objective of 40µg/m<sup>3</sup> in 2019 and in 2029 as 2027 both 'without' and 'with' the Development at all the existing receptor locations considered. The maximum predicted annual mean PM<sub>10</sub> concentration is 19.6µg/m<sup>3</sup> at Receptor 20 in 2019. Using the impact descriptors outlined in **Table 10.10** of Chapter 10: Air Quality (of the March 2022 ES), the Development is predicted to result in an 'negligible' impact at all existing receptors assessed.

The results in **Table 1** indicate that in 2019 and in 2029 as 2027 for both 'without' and 'with' the Development, all existing receptor locations are predicted to be below the 24-hour mean PM<sub>10</sub> objective value of 35 days exceeding 50µg/m<sup>3</sup>. The maximum predicted concentration in all scenarios tested is 2 days at Receptors 18, 19 and 20.

The results in **Table 1** indicate that in 2019 and in 2029 as 2027 for both 'without' and 'with' the Development, all existing receptor locations are predicted to be below the annual mean PM<sub>2.5</sub> objective value of 25µg/m<sup>3</sup>.

Using the impact descriptors outlined in **Table 10.10** of Chapter 10: Air Quality (of the March 2022 ES), the Development is predicted to result in an 'negligible' impact at all existing receptors.

In accordance with the EPUK / IAQM, guidance, and using professional judgement, based on the severity of the impact discussed above and the concentrations predicted at all the sensitive receptors considered in the air quality assessment, it is considered that the effect of the Development on local NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> concentrations would be **insignificant**.

#### *Conditions within the Development*

As shown by the results in **Table 1**, the predicted NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> concentrations for locations within the Development with relevant exposure are below the relevant objectives in 2029 as 2027 for all floor levels. As such, it is considered that the effect of introducing future residential and school uses to the Site is **insignificant**.

#### *Overall Predicted Effects of the Development*

Using professional judgement, based on the severity of the impact discussed above and the concentrations predicted at all the sensitive receptors considered in the air quality assessment - it is considered that the effect of the Development on local NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> concentrations would be **insignificant**.

## Updated Air Quality Modelling

The traffic data, background, car park emissions and model verification has been updated and presented below. All other technical information and data upon which the operational phase of the air quality assessment is based has not been updated and remains as presented in **Appendix 10.1** of the March 2022 ES.

## Traffic Data

Updated traffic flow data comprising Annual Average Daily Traffic (AADT) flows, traffic composition (% HDVs – Heavy-Duty Vehicles) and speeds (in kph) were used in the model as provided by Stantec for the surrounding road network. **Table A1** presents the traffic data used within the air quality assessment.



Table A1: 24 hour AADT Data Used within the Assessment

Receptor Name	Speed (kph)	Direction	Base 2019		Without Construction 2028		With Construction 2028		Without Development 2029 as 2027		With Development 2029 as 2027	
			AADT	%HDV	AADT	%HDV	AADT	%HDV	AADT	%HDV	AADT	%HDV
A316 Clifford Avenue	65	NB	17,116	2.5	18,547	2.5	18,591	2.7	18,694	2.5	18,846	2.5
	64	SB	15,123	2.8	16,387	2.8	16,431	3.0	16,517	2.8	16,811	2.8
A316 Lower Richmond Road	48	WB	13,917	4.1	15,081	4.1	15,108	4.3	15,200	4.1	15,472	4.1
	48	EB	15,685	3.7	16,997	3.7	17,024	3.8	17,131	3.7	17,388	3.7
South Circular (north of A316)	48	NB	7,708	4.7	8,352	4.7	8,363	4.8	8,418	4.7	8,504	4.6
	48	SB	9,114	4.0	9,876	4.0	9,887	4.1	9,954	4.0	10,083	3.9
South Circular (south of A316)	48	NB	10,774	4.0	11,674	4.0	11,702	4.2	11,766	4.0	11,766	4.0
	48	SB	10,025	4.1	10,863	4.1	10,890	4.4	10,949	4.1	11,035	4.1
A3003 Lower Richmond Road (Watney's Sports Ground)	44	WB	7,388	4.0	8,006	4.0	8,115	5.3	8,069	4.0	8,666	3.9
	48	EB	9,699	2.9	10,509	2.9	10,619	3.9	10,592	2.9	11,273	2.9
A3003 Lower Richmond Road (Mortlake Green)	39	WB	7,357	3.6	7,972	3.6	7,972	3.6	8,035	3.6	8,679	3.6
	45	EB	2,418	10.7	2,620	10.7	2,620	10.7	2,641	10.7	3,310	9.2
Williams Lane	41	NB	203	0.0	219	0.0	219	0.0	221	0.0	559	1.8
	42	SB	248	1.2	268	1.2	268	1.2	270	1.2	568	2.2



Receptor Name	Speed (kph)	Direction	Base 2019		Without Construction 2028		With Construction 2028		Without Development 2029 as 2027		With Development 2029 as 2027	
			AAADT	%HDV	AAADT	%HDV	AAADT	%HDV	AAADT	%HDV	AAADT	%HDV
Mortlake High Street	51	WB	7,455	13.7	8,078	13.7	8,107	13.6	8,142	13.7	8,584	13.1
	33	EB	10,014	13.7	10,851	13.7	10,879	13.7	10,936	13.7	11,400	13.3
The Terrace (west of Barnes Bridge Station)	46	WB	8,607	8.7	9,326	8.7	9,355	8.6	9,400	8.7	9,749	8.5
	47	EB	9,267	8.7	10,042	8.7	10,071	8.7	10,121	8.7	10,552	8.5
White Hart Lane (south of Mortlake High Street)	39	NB	2,250	8.3	2,438	8.3	2,438	8.3	2,457	8.3	2,549	8.1
	41	SB	2,757	7.5	2,988	7.5	2,988	7.5	3,012	7.5	3,045	7.5
Sheen Lane (north of Level Crossing)	48	NB	2321	1.8	2515	1.8	2515	1.8	2535	1.8	2737	1.9
	48	SB	2327	2.6	2522	2.6	2522	2.6	2542	2.6	2747	2.7
Sheen Lane (south of Level Crossing)	48	NB	2321	1.8	2515	1.8	2515	1.8	2535	1.8	2737	1.9
	48	SB	2327	2.6	2522	2.6	2522	2.6	2542	2.6	2747	2.7
Sheen Lane (south of South Circular)	33	NB	2,394	3.3	2,594	3.3	2,594	3.3	2,615	3.3	2,743	3.3
	34	SB	2,605	5.1	2,823	5.1	2,823	5.1	2,845	5.1	2,965	5.0
South Circular Road (west of Sheen Lane)	43	WB	9,531	8.7	10,328	8.7	10,356	9.0	10,410	8.7	10,410	8.7
	44	EB	9,205	8.1	9,974	8.1	10,002	8.3	10,053	8.1	10,053	8.1

## Underground Car Parks

- 11.1. The Development includes two basement car parks with extraction systems – one located in Development Area 1 and one in Development Area 2. The technical specification of the ventilation strategy for Development Area 2 was indicative at the time of writing. As such the basement extraction system for Development Area 2 has not been considered in the air quality assessment. The final extraction system would be designed in accordance with best practice design and appropriate regulations and be secured by a suitably worded planning condition. As such, it is anticipated that the car park extraction system used for Development Area 1 would not give rise to significant environmental effects and has not been considered further at this stage.
- 11.2. The Development Area 1 basement car park would provide 408 car park spaces, 43 motorcycle spaces and 1,426 cycle spaces. The Development Area 1 basement car park would be ventilated by 11 louvres located across Development Area 1.
- 11.3. The dimensions of the Development Area 1 car park and the exhaust vents was obtained from plans provided by Hoare Lea, and Stantec provided the number of vehicle trips predicted to use the car parks. To account for at least 20% of the car park spaces having active electric charging point infrastructure, the vehicle trips for the Development Area 1 car park were reduced by 20% (from 1,856 to 1,485). The diurnal variation in traffic flows, as presented in **Figure A1** of **Appendix 10.1** of the **March 2022 ES**, was used for the dispersion modelling of the car park emissions.
- 11.4. The characteristic petrol and diesel vehicle split for 2027, in addition to the indicative cold start emissions of NO<sub>x</sub> and PM<sub>10</sub> for 2027, were collated from the London Vehicle Fleet Composition Projections (Base 2013 revised in 2018) from the National Atmospheric Emission Inventory (NAEI) website<sup>1</sup>.
- 11.5. The average distance travelled within the car park was calculated at 200m – a worst case assumption. The distance travelled was used to calculate the total 2027 car park emissions (in g/s) for both NO<sub>x</sub> and PM<sub>10</sub> as detailed in Row Q and Row U of **Table A2**. The emissions were then apportioned to the vent, and then divided by the volume of the source to get emissions in the g/m<sup>3</sup>/s.

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<sup>1</sup> [Emission factors for transport - NAEI, UK \(beis.gov.uk\)](https://www.beis.gov.uk/emission-factors-for-transport)

Table A2: Pollutant Emission for the Development Area 1 Car Park

ID	Input Parameter	Calculation	Development Area 1
A	2027 % Vehicle Split	Petrol	43.7
B		Diesel	33.6
C	Cold Start Emissions (g/trip)	Petrol	0.047
D		Diesel	0.322
E	PM <sub>10</sub>	Diesel	0.022
F	Car Park Trips (per day)		1,485
G	Car Park Trips (per hour)		61.9
H	Cold start trips (per day)	F/2	743
I	NO <sub>x</sub> (petrol) Cold Start Trips (per second)	A*H/86400	0.0039
J	NO <sub>x</sub> (diesel) Cold Start Trips (per second)		0.00281
K	PM <sub>10</sub> (diesel) Cold Start Trips (per second)	B*H/86400	0.00281
L	NO <sub>x</sub> Cold Start Emissions (g/s)	(I*C)+(J*D)	0.0011
M	PM <sub>10</sub> Cold Start Emissions (g/s)	K*E	0.00006
N	Average Distance Travelled (km)		0.2
P	NO <sub>x</sub> Emission Rate (from ADMS Roads) (assuming 5kph) (g/km/s)		0.00008
Q	NO <sub>x</sub> Emission Rate (g/s)	N*P	0.0000153
R	NO <sub>x</sub> Emission Rate with Cold Starts (g/s)	Q+L	0.00112
S	PM <sub>10</sub> Emission Rate (from ADMS Roads) (assuming 5kph) (g/km/s)		0.00001
T	PM <sub>10</sub> Emission Rate (g/s)	N*S	0.0000010
U	PM <sub>10</sub> Emission Rate with Cold Starts (g/s)	T+M	0.00006

11.6. The car park emissions were added as an industrial volume source in the ADMS-Roads model. The size of the louvres and emission rates from west to east across the Development Area 1 are presented in **Table A3**.

Table A3: Emission Rates for the Proposed Car Park Vent

Car Park Louvre	Dimensions (m <sup>3</sup> )	Release Height (m)	Emission Rate (g/m <sup>3</sup> /s)		
			NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
1	2	0	5.09822E-05	2.93575E-06	2.97027E-06
2	7.1	0	1.43612E-05	8.26972E-07	8.36696E-07
3	11.1	0	9.18599E-06	5.28964E-07	5.35184E-07
4	6	0	1.69941E-05	9.78584E-07	9.9009E-07
5	6.5	0	1.56868E-05	9.03308E-07	9.13929E-07
6	6.5	0	1.56868E-05	9.03308E-07	9.13929E-07
7	13	0	7.84342E-06	4.51654E-07	4.56965E-07
8	5.2	0	1.96085E-05	1.12913E-06	1.14241E-06
9	9.2	0	1.10831E-05	6.38207E-07	6.45711E-07
10	5.4	0	1.88823E-05	1.08732E-06	1.1001E-06
11	9.4	0	1.08473E-05	6.24628E-07	6.31973E-07

Note: For accuracy, the changes arising from the Development have been calculated using the exact output from the ADMS models rather than the rounded numbers within Table A3.

## Background Pollutant Concentrations

- 1.1.1 Background pollutant concentrations are pollution sources not directly considered in the dispersion modelling. Background pollutant concentrations have therefore been added to contributions from the modelled pollution sources, for each year of assessment.
- 1.1.2 The EHO at LBRuT requested background pollutant concentrations monitored at the Wetlands Centre, Barnes. The Wetlands Centre automatic monitor is located approximately 2.5km to the north-east from Site and is classified as a suburban monitor.
- 1.1.3 **Table A4** presents the most recent monitored concentrations measured at the Wetlands Centre automatic monitor.

Table A4: Measured Concentrations at the Wetlands Centre Suburban Background Automatic Monitor

Pollutant	Air Quality Strategy Objective	2015	2016	2017	2018	2019
NO <sub>2</sub>	Annual Mean (40µg/m <sup>3</sup> )	21	25	21	20	21
	200ug/m <sup>3</sup> as a 1 hour mean, not to be exceeded more than 18 times a year	0	0	0	0	0
PM <sub>10</sub>	Annual Mean (40µg/m <sup>3</sup> )	17	16	15	15	16
	50ug/m <sup>3</sup> as a 24 hour mean, not to be exceeded more than 35 times a year	1	3	3	0	3

Source: London Air Quality Network. Available at [www.londonair.org.uk](http://www.londonair.org.uk)

- 1.1.4 **Table A4** shows all monitored pollutants at the Wetland Centre Suburban monitor were below their respective objectives in all years.
- 1.1.5 In addition to the monitoring data, forecast UK background concentrations of NO<sub>x</sub>, NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> are available from the Defra LAQM Support website<sup>2</sup> for 1x1km grid squares for assessment years between 2018 and 2030 (published in August 2020). **Table A5** presents the Defra background concentrations for the years 2019 and 2027, where applicable for the grid squares the Site, diffusion tubes for model verification, and local receptors are located within.

Table A5: Defra Background Maps in 2019 and 2027 for the Grid Squares at receptors

Pollutant	Annual Mean Concentration (µg/m <sup>3</sup> )									
	520500, 175500(a)		519500, 175500(b)		518500, 175500(c)		519500, 176500(d)		520500, 176500(e)	
	2019	2027	2019	2027	2019	2027	2019	2027	2019	2027
NO <sub>2</sub>	22.6	17.4	22.8	17.2	23.4	n/a	22.3	n/a	21.9	16.7
PM <sub>10</sub>	17.5	16.1	17.9	16.5	17.8	n/a	17.1	n/a	16.8	16.1
PM <sub>2.5</sub>	11.8	10.9	12.1	11.1	12.0	n/a	11.5	n/a	11.3	10.3

Notes: (a) Representative of Diffusion Tubes CDT 51 & CDT 70, Receptors: 2,3 6-15, 21, 23, Proposed Receptors in Plots 1, 5, 6, 9, 10 12, 13, 14 and School  
 (b) Representative of Diffusion Tubes CDT 74 & CDT 52, Receptors: 16-20, 22, 24, 26-28  
 (c) Representative of Diffusion Tube CDT 18  
 (d) Representative of Diffusion Tube CDT 55  
 (e) Representative of Receptors: 1, 4, 5, Proposed Receptors in Plots 2, 3, 4, 7, 8, 9, 11, 15 - 21

- 1.1.6 As requested by LBRuT the monitored background concentrations at the Wetlands Centre Suburban monitor in 2019, as 21µg/m<sup>3</sup> for annual mean NO<sub>2</sub> and 16µg/m<sup>3</sup> for annual mean

<sup>2</sup> <http://laqm.defra.gov.uk/>

PM<sub>10</sub>, were used in the assessment. The background NO<sub>2</sub> and PM<sub>10</sub> concentrations for the opening year at the Wetlands Centre Suburban monitor, assumed to be 2027, were predicted using Defra background maps. The ratio reduction of Defra background maps from 2019 to 2027 were used to predict NO<sub>2</sub> and PM<sub>10</sub> 2027 concentrations. In the absence of available PM<sub>2.5</sub> monitoring data, the Defra background maps PM<sub>2.5</sub> concentrations have been used

1.1.7 Background concentrations used in the assessment are presented in **Table A6**.

Table A6: Background Concentrations used within the Assessment

Pollutant	Annual Mean Concentration (µg/m <sup>3</sup> )								
	2019					2027			
	(a)	(b)	(c)	(d)	(e)	(a)	(b)	(e)	
NO <sub>2</sub>	21	21	21	21	21	16.1	15.8	16.0	
PM <sub>10</sub>	16	16	16	16	16	14.7	14.8	15.4	
PM <sub>2.5</sub>	11.8	12.1	12.0	11.5	11.3	10.9	11.1	10.3	

Notes: The following adjustment factors were obtained from Defra Maps to calculate 2027 NO<sub>2</sub> and PM<sub>10</sub> concentrations  
 Grid square (a)- adjustment factor of 0.7669 was used for NO<sub>2</sub>, and 0.9203 was used for PM<sub>10</sub>  
 Grid square (b)- adjustment factor of 0.7547 was used for NO<sub>2</sub>, and 0.9232 was used for PM<sub>10</sub>  
 Grid square (e)- adjustment factor of 0.7624 was used for NO<sub>2</sub>, and 0.9631 was used for PM<sub>10</sub>

## Model Verification

**Table A7** compares the modelled and equivalent measured roadside NO<sub>2</sub> concentrations at the diffusion tube sites.

Table A7: Annual Mean NO<sub>2</sub> Modelled and Monitored Concentrations

Site ID	Monitored Annual Mean NO <sub>2</sub> (µg/m <sup>3</sup> )	Modelled Total Annual Mean NO <sub>2</sub> (µg/m <sup>3</sup> )	% Difference
DT74	51.6	38.5	-25.3
DT51	30.0	25.1	-16.4
DT52	55.4	40.5	-26.8
DT18	42.3	32.0	-24.3
DT55	39.9	34.0	-14.8
DT70	41.8	28.0	-33.0

LAQM.TG(16) suggests that where there is no systematic over or under prediction at the diffusion tube results and where the majority of modelled results are within 10% of the monitored concentrations that the model verification is appropriate and no further adjustment factor is required. Given the results in **Table A7** model adjustment was undertaken.

Box 7.15 in LAQM.TG(16) indicates a method based on comparison of the road NO<sub>x</sub> contributions and calculating an adjustment factor. This requires the roadside NO<sub>x</sub> contribution to be calculated. In addition, monitored NO<sub>x</sub> concentrations are required, which were calculated from the annual mean NO<sub>2</sub> concentration at the diffusion tube site using the NO<sub>x</sub> to NO<sub>2</sub> spreadsheet calculator as described above. The steps involved in the adjustment process are presented in **Table A8**.

Table A8: Model Verification Result for Adjustment NO<sub>x</sub> Emissions (µg/m<sup>3</sup>)

Site ID	Monitored NO <sub>2</sub>	Monitored Road NO <sub>x</sub>	Modelled Road NO <sub>x</sub>	Ratio of Monitored Road Contribution NO <sub>x</sub> /Modelled Road Contribution NO <sub>x</sub>
DT21	51.6	73.9	38.8	1.9
DT51	30.0	18.9	8.3	2.3
DT52	55.4	85.1	43.8	1.9
DT18	42.3	48.3	23.4	2.1
DT55	39.9	42.2	27.9	1.5
DT70	41.8	47.0	14.5	3.2

**Figure A1** shows the mathematical relationship between modelled and monitored roadside NO<sub>x</sub> (i.e. total NO<sub>x</sub> minus background NO<sub>x</sub>) in a scatter graph (data taken from **Table A8**), with a trendline passing through zero and its derived equation.

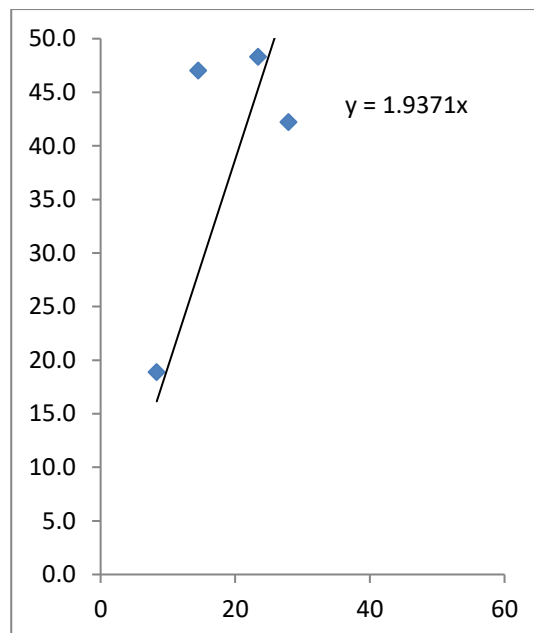


Figure A1: Unadjusted Modelled versus Monitored Annual Mean Roadside NO<sub>x</sub> at the Monitoring Sites (µg/m<sup>3</sup>)

Consequently, in **Table A9** the adjustment factor (1.9371) obtained from **Figure A1** is applied to the modelled NO<sub>x</sub> Roadside concentrations to obtain improved agreement between monitored and modelled annual mean NO<sub>x</sub>. This has been converted to annual mean NO<sub>2</sub> using the NO<sub>x</sub>:NO<sub>2</sub> spreadsheet calculator.

Table A9: Adjusted Annual Average NO<sub>2</sub> Concentrations Compared to Monitored Annual Mean NO<sub>2</sub> Concentrations (µg/m<sup>3</sup>)

Site ID	Adjusted Modelled Road NO <sub>x</sub>	Modelled Total NO <sub>2</sub>	Monitored Total NO <sub>2</sub>	% Difference
DT21	75.1	52.0	51.6	0.8
DT51	16.2	28.8	30.0	-4.2
DT52	84.9	55.3	55.4	-0.2
DT18	45.4	41.1	42.3	-2.7
DT55	54.1	44.5	39.9	11.5
DT70	28.1	34.1	41.8	-18.5

### Statistical Analysis

To determine if the model is performing well further statistical analysis of the performance of the modelled results has been undertaken using the methodology detailed in LAQM.TG(16) Box 7.17: Methods and Formulae for Description of Model Uncertainty. This statistical analysis checks the performance of the model used and the accuracy of the results (observed vs predicted).

The methodology for the calculations is presented in LAQM.TG(16) for the following:

- **Correlation Coefficient:** This is used to measure the linear relationship between the predicted and observed data. A value of zero means no relationship and a value of 1 means an absolute relationship. This statistic can be particularly useful when comparing a large number of model and observed data points.
- **Fractional Bias:** this is used to identify if the model shows a systematic tendency to over or under predict. Values vary between +2 and -2 and has an ideal value of zero. Negative values suggest a model over-prediction and positive values suggest a model under-prediction.
- **Root Mean Square Error:** This is used to define the average error or uncertainty of the model. The units of the Root Mean Square Error are the same as the quantities compared.

The results of the statistical calculation are presented in **Table A10**.

Table A10: Statistical Calculations of Error for the Modelled Results

Statistical Calculation	Perfect Value	Acceptable Variable Tolerance	Unadjusted Model Score	Adjusted Model Score
Correlation Coefficient	1	N/A	0.915	0.913
Fractional Bias	0	+2 to -2	0.29	0.10
Root Mean Square Error	0	±10%	11.8	3.8

Based on the results presented in **Table A10** it is considered that the model is performing well following adjustment. When adjusted there is no systematic over or under prediction of results and the root mean square error is within the acceptable tolerance levels, further adjustment is therefore not necessary.

### Particulate Matter (PM<sub>10</sub> and PM<sub>2.5</sub>)

PM<sub>10</sub> and PM<sub>2.5</sub> monitoring data is not available for the Site area. Therefore, the roadside modelled NO<sub>x</sub> factor of 1.9371 factor has been applied to the roadside PM<sub>10</sub> and PM<sub>2.5</sub> modelling results.



## **8. Arboriculture Response Tracker**

Prepared by Waterman IE

Dated 27th July 2022

(pages 241 – 250)

# Former Stag Brewery, Mortlake, Hybrid Planning Application (22/0900/OUT) & Detailed Application School (22/0902/FUL)

## Briefing Note – Response to Consultee Comments on Arboriculture

**Date:** 27<sup>th</sup> July 2022

**Client Name:** Reselton Properties Limited

**Document Reference:** WIE18671-114-BN-3.4.1-Arboriculture Response

This document has been prepared and checked in accordance with Waterman Group's IMS (BS EN ISO 9001: 2015, BS EN ISO 14001: 2015 and BS EN ISO 45001:2018)

Issue	Prepared by	Checked & Approved by
001	Richard Harris Associate Director	Steve Brindle Associate Director
002	Richard Harris Associate Director	Steve Brindle Associate Director



### Introduction

- 1.1. Comments have been received on 27 May 2022 from statutory consultees and internal consultees at the London Borough of Richmond upon Thames (LBRuT) on the Outline Planning Application (Application A - planning ref. 22/0900/OUT) and the Detailed Planning Application for the School (Application B - planning ref. 22/0902/FUL) at the former Stag Brewery site. This Briefing Note provides a response to those comments received pertaining to Trees; namely:
  - Application A: 22/0900/OUT 7. Trees
  - Application B: 22/0902/FUL 6. Trees
- 1.2. The internal consultees from LBRuT have made a number of requests for further information and have recommended heads-of-terms for tree related planning conditions. These will be responded to in turn. The majority of these items are the same for both Applications A and B. This Briefing Note will respond to those actions in the order that they are presented in the 'Stag Consultee Response Document'. As such, the consultee responses to Application A will be dealt with first,

and responses will only be made to the consultee responses to Application B where they differ from those received for Application A.

## 2. Application A: 22/0900/OUT Internal Consultees – 7. Trees

- 2.1. The LBRuT's internal consultees have made a number of requests for further information and recommended conditions as follows.

### CAVAT

#### *LBRuT Consultee Response*

*"The LPA will require a tree-by-tree "Full" CAVAT valuation (Including the calculation methodology for each tree), to be included for each tree in the tree survey and undertaken by an Arboriculturist experienced in using the method. This is to ensure that any loss of amenity from tree removals is, as a minimum, commensurate with the value of the new tree planting proposals. Individual CAVAT valuation will be an integral part of ensuring that all retained trees, both within and adjacent to the site, will receive appropriate protection during the preparation, demolition, construction and conclusion phases of a long and complex project.*

*This is to include the 3x Local Authority Street trees flagged for removal (T107, T152 & T333), who's CAVAT valuation will be used to secure remuneration for off-site replacement tree planting in the public realm via a section 106 payment."*

#### *Waterman Infrastructure and Environment Limited (WIE) Response*

- 2.2. Policy LP 16 (Trees, Woodlands and Landscape) of the LBRuT Local Plan (July 2018) states that when assessing development proposals, the Council will "require, where practicable, an appropriate replacement for any tree that is felled; a financial contribution to the provision for an off-site tree in line with the monetary value of the existing tree to be felled will be required in line with the 'Capital Asset Value for Amenity Trees' (CAVAT)". The notes within the Local Plan which provide further details on this state that "An appropriate replacement for any tree that is felled will be required on-site where practicable. Where this is not possible, the Council will require a financial contribution to provide an off-site street tree".
- 2.3. From the above points it is clear that a CAVAT valuation is only required where 'appropriate replacements' cannot be planted on-site. Whilst the Local Plan does not define what an 'appropriate replacement' is, the proposed scheme will result in the loss of 50No. existing trees, whilst up to 404No. new trees will be planted. This represents a replacement ratio of 8:1 which is felt to represent 'appropriate replacements and is above the level of replacement planting proposed in a sample of other approved Major Applications in the LBRuT.

Table 1 LBRuT Approved Major Planning Applications with Proposed Tree Replacement Ratio

LBRuT Planning Ref	Name	Ratio of Proposed Trees to Removed Trees
21/2533/FUL	Elleray Hall Site North Lane Depot And East Car Park Middle Lane Teddington	1:1
21/0156/FUL	Milevale Properties Ltd 672 Hanworth Road Whitton Hounslow	0:3
21/0094/FUL	Twickenham Film Studios	0:2 (although CAVAT value of trees secured through S106 agreement for off-site planting)
19/0111/FUL	12 To 14 Station Road And 13 And 19 To 33 Lower Teddington Road Hampton Wick	1:1 (approximately)

- 2.4. As such, it is not felt that there is justification in providing a CAVAT valuation of all existing trees.
- 2.5. With regards to the second point, the LPA already has a number of mechanisms to control the removal of trees across the Site, either through Tree Preservation Orders or planning controls (such as the need to submit and work to an approved Arboricultural Method Statement). Furthermore, it is assumed that the planning conditions associated with any approved application will require that any tree which dies within the first five years post completion of the development will be replaced.
- 2.6. Providing a CAVAT value (and subsequent remuneration) for the off-site trees to be removed would be in accordance with the recommended 'Heads of Terms' for the S106 agreement proposed in the Committee Report for the original planning application. This is considered to be a reasonable request, as unlike other trees to be removed as a result of the Development, these are in the ownership of LBRuT and as such a reasonable level of compensation should be provided to facilitate off-site tree planting. To comply with Policy LP16 the level of compensation should be derived from the CAVAT value of the trees.
- 2.7. In the previous Committee Report (dated January 2020) it was recommended that a "CAVAT contribution of £91,935 to compensate for the loss of existing trees on the highway" be secured. Given the withdrawal of Application C, there are now only 5No. off-site trees to be removed (T59, T60, T107, T152 and T333). T59 and T60 are to be removed due to the impact of the proposed Development, whilst T107, T152 and T333 are to be removed as a result of the S278 works.
- 2.8. The CAVAT value of the 5No. offsite trees is as follows:
- T59     £5,380
  - T60     £1,471
  - T107   £17,483
  - T152   £1,207
  - T333   £7,183

## Mortlake Green Access

### *LBRuT Consultee Response*

*"Page 14 of the "Landscape Design and Access Statement, Rev 01 dated March 2022" states that "No trees in Mortlake Green are proposed to be affected" and that "Pavements within Tree Protection Zones of existing trees in the park will be designed and detailed to avoid deep excavation and limit impact on existing root systems". From viewing the red line boundary there are several LA owned trees, including 2x street trees (T317 & T316), whose roots could be impacted by this proposed access. Council will expect the impacts of any proposed hard surfacing to be assessed in relation to the below and above ground constraints on existing trees, including those in the park and a no-dig solution used. All trees potentially impacted by these works will require a CAVAT valuation – include in survey"*

### *WIE Response*

- 2.9. The consultee response recognises the fact that the proposed new access to Mortlake Green has the potential to impact a number of trees. It states that the *"council will expect the impacts of any proposed hard surfacing to be assessed in relation to the below and above ground constraints on existing trees, including those in the park and a no-dig solution used"*.
- 2.10. The Arboricultural Impact Assessment (AIA) submitted with the Outline Planning Application (document ref. WIE18671-102-R-6-2-1-AIA) acknowledges this and identifies the areas within the RPAs of the trees in this area as a 'Construction Working Area' (CWA). In paragraphs 8.12 to 8.19 of the AIA, details are provided as to what actions can or cannot be undertaken within the RPAs of the retained trees this includes the following actions which must be avoided:
- Compaction of the ground;
  - Any change in soil levels (even if temporary), including ground excavation and soil stripping;
  - Covering the root zone with impervious surfaces;
  - A rise in the water table level or ground saturation; and
  - Damage by the direct toxicity of some materials (e.g. petrol, oil and lime in cement can kill underlying roots).
- 2.11. In Paragraph 8.1, it also states that *"all demolition and construction works affecting the CWA (which may include removal of existing hard surfacing, construction of new soft/hard landscape, access for piling activities and / or remediation activities (see paragraph 3.25 below)) would be carefully planned and executed via a Site specific Arboricultural Method Statement (AMS), secured via Planning Condition"*.
- 2.12. As the AIA will form part of any planning approval for the Development, the measures detailed above are considered to be sufficient to provide the Council with sufficient powers to enforce all necessary tree protection measures subject to the submission of suitable AMS secured through planning conditions.

- 2.13. Securing tree protection measures through the production of an AMS is in accordance with draft condition **NS27** proposed in the previous LBRuT Committee Report (dated January 2020) for Application A and which states that “*unless otherwise agreed in writing by the Local Planning Authority, no development shall take place until an Arboricultural Method Statement (AMS), has been submitted to and approved in writing by the Local Planning Authority*”, and draft condition **NS28** for Application B which states “*Prior to the commencement of development, an Arboricultural Method Statement (AMS), shall be submitted to and approved in writing by the Local Planning Authority;*.”
- 2.14. The consultee response also states that all trees “*potentially impacted by these works will require a CAVAT valuation*”. Again, for the reasons set out in paragraphs 3.2 to 3.6 of this document, this is not considered to be appropriate.

### Tree Root Protection Areas (RPA) – update and provide existing site conditions.

#### *LBRuT Consultee Response*

*“When illustrating the RPA of any tree, both on and adjacent to the site, BS5837 (Trees in relation to design, demolition and construction - Recommendations: 2012) Section 4.6.2. specifies the following;*

- Where pre-existing site conditions or other factors indicate that rooting has occurred asymmetrically, a polygon of equivalent area should be produced. Modifications to the shape of the RPA should reflect a soundly based Arboricultural assessment of likely root distribution.”*
- These modifications are to account for and include but not be limited to “The morphology and disposition of the roots, when influenced by past or existing site conditions (e.g. the presence of roads, structures and underground apparatus)”*
- RPA's in submitted Tree Constraint Plans (TCP) and Tree Protection Plans (TPP) must be calculated and modified to account for asymmetric root development in the proximity of existing structures and hard surfacing as part of the full application”*

#### *WIE Response*

- 2.15. The consultee response acknowledges that Section 4.6.2 of BS5837:2012 -Trees in relation to design, demolition and construction – Recommendations states that “*Where pre-existing site conditions or other factors indicate that rooting has occurred asymmetrically, a polygon of equivalent area should be produced. Modifications to the shape of the RPA should reflect a soundly based Arboricultural assessment of likely root distribution.*”
- 2.16. The consultee then goes on to request that the RPAs shown on the Tree Constraints Plan (TCP) and the Tree Protection Plan (TPP) “*must be calculated and modified to account for asymmetric root development in the proximity of existing structures and hard surfacing as part of the full application.*”
- 2.17. BS5837:2012 provides recommendations only. During the design development, the Arboricultural Consultant reviewed the impact of the proposed development on a tree-by-tree basis, and it was not considered that plotting the RPAs as polygons would provide any further protection for the



trees. For example, as shown in **Figure 1**, in the case of trees T70 to T82 along Lower Richmond Road, it could be argued that their RPAs should be off set to acknowledge the barrier to root growth created by the road to the south (it is assumed that roots are still likely to develop below the pavement). Therefore, this would extend the RPAs further to the north, however this would have no impact on the development proposals.

Figure 1 Excerpt from Tree Protection Plan



- 2.18. On this basis, it is considered that in this instance, plotting the RPAs as circles is a robust approach to follow and in accordance with the recommendations made in BS5837.

## Shading

### *LBRuT Consultee Response*

*“The impact of shading needs to be assessed and incorporated as part of the submitted Arboricultural documentation. There is also an increased risk that such shading will lead to an increase in post-development pressure on affected trees for their eventual removal. It must be stipulated that any such future requests for tree removal for these reasons will be resisted as per the Councils Local plan and tree policy.”*

### *WIE Response*

- 2.19. All trees cast shade and BS5837 states that shade can affect both buildings and open spaces.
- **Shading of buildings.** Shading of buildings by trees can be a problem, particularly where there are rooms which require natural light. Proposed buildings should be designed to take account of existing trees, their ultimate size and density of foliage, and the effect that these will have on the availability of light.
  - **Shading of open spaces.** Open spaces such as gardens and sitting areas should be designed to meet the normal requirement for direct sunlight for at least a part of the day.
- 2.20. However, shading can also be desirable to reduce glare or excessive solar heating, or to provide for comfort during hot weather. The combination of shading, wind speed/turbulence reduction and evapo-transpiration effects of trees can be utilized in conjunction with the design of buildings and spaces to provide local microclimatic benefits such as summer cooling and winter shelter.
- 2.21. Shading can be of particular concern where buildings and open spaces are to be sited immediately to the north of large mature trees or dense groups of trees. Positioning residential gardens immediately to the east of large trees can also result in dense shade being cast in the early evening at the time when the gardens are most likely to be occupied.
- 2.22. The majority of the retained trees are either to the north of the proposed Development, and therefore the shade these trees cast is unlikely to be significant (where shading is likely to be a significant constraint, BS5837:2012 recommends that a shading arc for should be plotted on the Tree Constraints Plan, but that this should be plotted to the north of the trees as shading to the south of the trees is not considered likely to be a significant constraint).
- 2.23. Where trees are in close proximity to the proposed buildings, it is considered that this is acceptable for the following reasons:
- As deciduous trees, they will provide shade and cooling to any affected flats in the summer when most needed, but will allow light, and therefore have a heating affect in the winter.
  - There are examples nearby of trees being closer to residential properties where there appears to be a harmonious relationship between the trees and the dwellings.
  - As protected trees, the council will have control over any management works requested for these trees.
- 2.24. In light of the above, shading has been considered within the design of the Development.

## Lighting Provision

### *LBRuT Consultee Response*

*"Proposed Site Wide Landscape GA Plan Ref: P10736-00-004-GIL0101, dated 11/03/2022" that there are numerous, potential conflicts between lighting positioning in relation to newly planted trees, with some lighting columns being positioned either adjacent to or within the plotted canopies of proposed trees. The positioning and design of lighting in relation to proposed and existing trees needs to be carefully considered regarding potential obstructions, with particular attention given to the requirement for increased management and maintenance of these trees as they grow. Potential*



*obstructions need to be highlighted and alternative lighting positions submitted and agreed by the LPA in cases where such conflicts are identified. – construction within root zones / services / canopy / illumination.”*

#### *WIE Response*

- 2.25. Working with Michael Grub Studio (the scheme’s lighting design practice), Gillespies LLP (the scheme’s landscape architects) have updated the *Proposed Site Wide Landscape GA Plan Ref: P10736-00-004-GIL0101* to remove conflicts between proposed trees and lighting columns.

### Hard Surfacing and Footpaths

- 2.26. The consultee response states that *“areas of hard surfacing areas within the RPA of retained trees must use a permanent no-dig solution (ie. Cellweb), not just as protection measures during the demolition and construction phase, but also potential temporary access route to Mortlake Green. Further details of design, detail, cross sections are required”*.
- 2.27. Areas where new hard surfaces and replacement of existing hard surfaces are proposed within the RPAs of retained trees, have been identified in AIA as Construction Working Areas (CWA). As stated in paragraphs 2.10 to 2.13 of this document, the AIA has been written in such a way, so as to require details of these elements to be submitted to and approved by LBRuT through the submission of an AMS which will be secured through conditions).

### Tree Protection

#### *LBRuT Consultee Response*

*Section 8.13 of the report states "Tree protection should generally accord with the recommendations contained within BS5837:2012". Replace the words "Generally" and "Should" with "Will", unless otherwise previously agreed in writing with the local planning authority”*.

#### *WIE Response*

- 2.28. This point is accepted, and the report will be updated accordingly.

### Recommended Conditions

- 2.29. The Consultee recommended the following conditions:
- Tree planting - further information / detail
  - Foundation design - details of foundation design and methodology for installation and construction that does not deleteriously impact nearby trees.
  - Underground services - Impact on the roots of retained trees properly assessed. Where a conflict is identified, a methodology of installation that avoids damage to tree roots must be submitted to the LPA for approval.
  - Tree protection

- 2.30. The consultee response lists the headings of a number of recommended conditions. The first one (Tree Planting – further information / detail) relates to the landscape proposals for the Development and is therefore not covered by this Briefing Note.
- 2.31. The remaining three recommended conditions are those that would be required to secure an AMS and as such are considered appropriate, subject to suitable wording.

### **3. Application B: 22/0902/FUL Internal Consultees - 6. Trees**

- 3.1. As previously stated, the majority of consultee responses to this application are the same as those for the '22/0900/OUT Internal Consultees – 7. Trees', and are therefore not reconsidered in this section of this Briefing Note.
- 3.2. The Consultee Responses which have been previously considered are:
  - CAVAT Valuation (paragraphs 2.1 to 2.8)
  - Tree Root Protection Areas (paragraphs 2.9 to 2.14)
  - Shading (paragraphs 2.19 to 2.24)
  - Lighting Provision (paragraph 2.25)
  - Hard Surfaces and Footpaths (paragraph 2.27)
  - Recommended Conditions (paragraphs 2.29 to 2.31)
- 3.3. The following is the only additional consultee response associated with this application.

#### **Tree Loss**

##### *Consultee Response*

*“Concerns around the future of T83-86 and T68 should be considered as part of a more detailed design that can be secured through the production of an Arboricultural Method Statement.”*

##### *WIE Response*

- 3.4. The consultee response raises concerns over the future of trees T83 to T86 and T68 and recommends that the impacts of the Development on these trees should be assessed, and any tree protection measures required specified through an AMS secured through planning conditions.
- 3.5. This comment is accepted with the exception of noting that T68 is identified in the AIA as being removed due to its proximity to the proposed paving around the sports pitch.

## **9. Design Code Comments**

Prepared by Squire & Partners

Dated 29th August 2022

(pages 251 – 259)

Page / Paragraph	LBRuT Comments	S&P Comments
Page 12 – phases of development	This does not correspond with the build out phases as identified in the CMS	
3.1.1	<p>With regards to ‘extension zones’ – the following are not accepted:</p> <ul style="list-style-type: none"> <li>• Block 19 (results in a poor relationship with Block 18);</li> <li>• North west corner of Block 18.</li> </ul> <p>The minimum gap of 8.5m gap between buildings is too small</p> <p>Where the minimum gap between facades with windows is below 18m consideration should be given of overlooking as noted below in Section 3.4.5</p> <p>➤ replace should with must</p>	<p>The gap is now noted as 10m which is achievable between all buildings</p> <p>Amended</p>
3.1.7	How do you define refuse / bicycle stores ‘must’ be kept to a minimum?	Amended
3.3	<p>The development of the detailed design of the building typologies should take into account views of this area of the development from the river and in particular the relationship of the new buildings to the setting of the Listed Buildings and other buildings that face the river on Thamesbank –</p> <p>➤ replace should with must</p> <p>The design of the new buildings should provide a contrast and variation of material in relation to these buildings. – why?</p>	<p>Amended</p> <p>Amended</p>
3.4.1	<ul style="list-style-type: none"> <li>• If the recess/elevation break is in the form of a rebate within the façade, then the minimum depth and width must be 0.5m</li> <li>➤ this is insufficient.</li> <li>• Block Massing and Articulation Residential square buildings should be articulated as an assemblage of aggregated elements. To the higher elements and long elevations this should be achieved with steps in storey, sections of recesses within the facade, variation of material tones and corner treatments as outlined on the page opposite</li> <li>➤ What are ‘higher elements’ and ‘long elevations’ – need definitions?</li> <li>• Height of Buildings A set back to the upper floors of buildings should be incorporated in circumstances where:</li> </ul>	<p>0.5m x 1m is sufficient and has been amended</p> <p>Amended to remove reference to higher elements</p>

	<ul style="list-style-type: none"> <li>➤ replace should with must</li> </ul>	
3.4.2	<ul style="list-style-type: none"> <li>• For mixed use buildings elevations must create a subtle distinction between ground and upper level uses. <ul style="list-style-type: none"> <li>➤ this is irrelevant as there are no mixed use buildings.</li> </ul> </li> <li>• Where ground floor uses have greater public access, this must be articulated in the design of ground floor frontage <ul style="list-style-type: none"> <li>➤ how is this relevant, as all uses are residential?</li> </ul> </li> <li>• As per the London Housing Design Guide, balconies must be a minimum depth of 1500mm and be large enough to achieve the minimum amount of amenity space required for each unit. <ul style="list-style-type: none"> <li>➤ insert 'should' between 'and be'</li> </ul> </li> </ul>	<p>Amended</p> <p>Amended</p>
3.4.4	<p>Consideration of building appearance and massing needs to be made from each of these viewpoints.</p> <ul style="list-style-type: none"> <li>➤ replace 'needs' with 'must'</li> </ul> <p>Recommend also considering:</p> <ul style="list-style-type: none"> <li>• View from Lower Richmond Road looking towards new cinema building</li> </ul>	Amended
3.4.5	<ul style="list-style-type: none"> <li>• Staggered windows and recessed balconies should be utilised to avoid any negative impact on privacy between units. <ul style="list-style-type: none"> <li>➤ Replace 'should' with 'must'.</li> </ul> </li> <li>• Buildings 20 and 21 are located 15.5m from Building 18 and particular care should be taken in this relationship to avoid overlooking. <ul style="list-style-type: none"> <li>➤ the plan on the same page shows 18m</li> </ul> </li> </ul>	<p>Amended</p> <p>Amended</p>
Rule set A	<ul style="list-style-type: none"> <li>• Rule Set A (Block end to end elevations 10m) <ul style="list-style-type: none"> <li>➤ however, the plan identifies Rule A elevations as those with 10-18m gaps between buildings.</li> </ul> </li> <li>• Staggered windows should be used on the facing elevations to avoid potential overlooking issues between rooms. <ul style="list-style-type: none"> <li>➤ replace 'should' with 'must'</li> </ul> </li> </ul>	Amended
Rule set B	<ul style="list-style-type: none"> <li>• No projecting facades within these areas. <ul style="list-style-type: none"> <li>➤ However, PR001 and 2 shows 1.5m extension zone within these areas.</li> </ul> </li> </ul> <p>There must not be any extension zones within rule set B.</p>	Amended
Plan on page 28	<ul style="list-style-type: none"> <li>• How will the scheme ensure satisfactorily living conditions for the 'right' angle corners on building 18?</li> </ul>	These units are dual aspect

3.4.6	Circulation core must be limited to 8 flats – London Housing Design Guide	Amended
3.4.8	<p>Contradiction:</p> <ul style="list-style-type: none"> <li>• Brick / masonry ‘should’ be considered as primary material</li> <li>• Next paragraph says brick / masonry ‘must’ be predominant material</li> </ul>	Amended
4.2	<ul style="list-style-type: none"> <li>• Street widths (kerb to kerb) should generally to be 5.5m with pedestrian footpaths on at least one side of the street (minimum of 1.2m) [fig. 01]. Road reserves are to be typically 15m wide. The School access street should be a minimum of 10.5m wide. To include a 5m wide carriageway (minimum) and 1.2m wide footpaths on both sides of the road. <ul style="list-style-type: none"> <li>➤ a minimum of 5.5m wide carriageway must be incorporated with a minimum 2m footpath proposed.</li> <li>• Footpaths must be a minimum of 1.2m wide, but typically a minimum of 1.8m clear from back of kerb is to be maintained.</li> <li>➤ – Insufficient – must be 2m.</li> </ul> </li> <li>• Any remaining space should be utilised for either a planted verge or on-street parking for the school. <ul style="list-style-type: none"> <li>➤ Omit comment in red.</li> </ul> </li> <li>• Footpaths must be a minimum of 1.2m wide, but typically a minimum of 1.8m clear from back of kerb is to be maintained. Tree pits are to be minimum of 1m wide x 1.5m long at the back of kerb, allowing centre of trees to be a minimum of 0.5m from back of kerb <ul style="list-style-type: none"> <li>➤ this would only allow 0.2m of uninterrupted surface – pavements must be 2m wide.</li> </ul> </li> <li>• Vehicle crossovers of footpaths may be configured as either single or double crossing, a maximum permissible width for a single crossover will be 5m <ul style="list-style-type: none"> <li>➤ SPD ‘Transport’ states, “5.14. Where a new development is built as a row of houses on a plot of land adjacent to a publicly maintained footway and vehicle accesses are part of the scheme, where these are acceptable and they meet current policy, these will be paired to a maximum width of 4.8m flat section. Between each pair a 5.5m</li> </ul> </li> </ul>	Amended without change to overall plans

	<p>gap/footway width must be provided, which will allow a safe area for:</p> <ul style="list-style-type: none"> <li>▪ pedestrians to stand whilst waiting for manoeuvring vehicles</li> <li>▪ locating street furniture and utility boxes</li> <li>▪ maintaining a useable on street parking space.”</li> </ul>	
4.3	<ul style="list-style-type: none"> <li>• Lighting should be provided for safety and security of users.</li> <li>➢ Replace with ‘must’. Who will be responsible for installing and maintaining lighting if the road is adopted?</li> <li>• Pathways should be minimum of 1.8m, contradicts paragraph 4.2, which requires 1.2m – as outlined previously, pavements should be a minimum of 2m wide.</li> </ul>	<p>Amended</p> <p>Please refer to Stantec drawing 38262/5501/100H – Proposed Highway Layout Possible Areas for Adoption</p>
4.3.1	<p>Shared cycle / pedestrian paths must be a minimum of 3.5m wide, with signage to guide shared use. - Please provide further explanation as to whether this is single or two way. If the latter, the 3.5m width is too narrow.</p>	
4.3.1	<ul style="list-style-type: none"> <li>• Not acceptable to have 2 tier cycle stores in public realm</li> <li>• Not acceptable to integrate play with cycle stores</li> <li>• ‘must’ instead of ‘should’ when looking at minimising look of cycle stores</li> </ul>	<p>This is residential cycle store within the courtyard (public realm) Reference to integrated play removed</p> <p>‘Must’ amended.</p>
4.4.3	<ul style="list-style-type: none"> <li>• Why is courtyard garden only a minimum of 50% soft landscaping? (Particularly with low UGF) – could this be increased?</li> </ul>	<p>Increased to 70% which is what is currently shown.</p>
4.4.4	<ul style="list-style-type: none"> <li>• UK native species ‘must’ predominate (not should)</li> </ul>	<p>Amended</p>
4.4.6	<p>Living roofs ‘must’ be incorporated into development (must aim for 70%)</p>	<p>Amended</p>
5.1	<p>This refers to the ‘residential square and street buildings’ as 4-7 stories high, however paragraph 3.3.2 refers to 4-6 stories high</p> <p>A buffer zone must be provided within the landscape between the street and ground floor level residential units – how large is this buffer zone?</p>	<p>Amended</p> <p>1.5m</p>
5.1.3	<p>Maximum of 8 units per core not 9. (London Housing Design Guide)</p>	<p>Amended</p>
5.1.4	<p>Refers to 4-7 stories high, however page 47 refers to 4-8 storeys high</p>	<p>Amended</p>
5.2.2	<p>Western unit of block 22 should be reduced to 2 storeys</p>	<p>We have not reduced this unit to keep the row of houses uniform with a consistent roof level. We considered this to be the most appropriate approach within the design of the masterplan</p>

5.2.4	Depth of windows should be a minimum of one brick length deep to add a sense of depth and interest to the elevations ➤ Window depth of 1 brick depth is insufficient – the document refers to 150mm in section on fenestration	Amended
5.3.2	Maximum of 9 units per core – this ‘must’ not be more than	Amended
PR001 E	<ul style="list-style-type: none"> <li>Block 18 must not have an extension zone closer to Reid Court</li> <li>Block 18 must not have an extension zone in SE and NE corner</li> <li>Block 19 must not have an extension zone in NW corner</li> <li>Block 18 must not have an extension zone closer to Block 20</li> </ul>	<ul style="list-style-type: none"> <li>Amended</li> <li>Extension zone to the northern façade has been removed which reduced the impact of the NE corner</li> <li>Extension zone to the northern façade has been removed</li> <li>Amended</li> </ul>
PR002 E	<ul style="list-style-type: none"> <li>Block 18 must not have extension zone: <ul style="list-style-type: none"> <li>o closer to Reid Court</li> <li>o closer to Block 20</li> </ul> </li> </ul>	Amended
PR003 E	Block 18 must not have extension zone closer to Reid Court on 5th storey	Amended
PR004 E	Remove all +2.2m and +3.014m extension zones – limit this to +1.5m	The +3m extension zones have been removed, however we have retained the +2.2m zones as these are on the set back floors of B18 and allow that storey to align with the floor below which would be required for certain sloped roof designs (such as a mansard roof)
PR007 E	<p>Why is there such a difference in ground levels:</p> <ul style="list-style-type: none"> <li>54cm between courtyard and buildings 18/19</li> <li>27cm between ground and building 20</li> <li>52cm between garden and block 16</li> </ul>	Unclear where these measurements are taken from, but the ground floor levels have been set due to flooding restrictions. All level differences are relatively minor and can be ramped within the ground floor corridors.
General comments for parameter plans	<p>General comments on extension zones</p> <ul style="list-style-type: none"> <li>Must not get closer to Reid Court</li> <li>Blocks 18/19 must not get closer</li> <li>Top floors may only have balconies</li> </ul>	Amended

### **Observations when comparing parameter plans with site elevation drawings**

#### **S&P General note on all site sections/elevations:**

The block datum referred to on PR007 is the ground floor level of the buildings, which is 6.6m for all except for the terraced houses. It does not refer to the exterior ground level shown on the drawings as this varies at different points across the buildings.

The site sections/elevations show the proposed massing (which is shown as the green lines in the parameter plans) and have the maximum extents dotted on in red. S&P have added spot levels to the maximum extents of the buildings to clear up any confusion about building height. The red lines of the maximum extents do vary in how much they are above the proposed massing. This is because the heights were calculated by multiplying a standard floor to floor height by the number of storeys, and then rounded up to the nearest whole number to make the



numbers as simple as possible to follow. Due to this rounding up the increases in height vary across different buildings. This strategy is consistent with the original application.

	PR 008 E	PR 007 E Block Datum (ground level)	Site elevations	LBRuT comments	S&P Comments
Block 13	<p>North - UP TO 22 m FROM BLOCK DATUM TO PARAPET UP TO 29m PARAPET A.O.D</p> <p>South - UP TO 16 m FROM BLOCK DATUM TO PARAPET UP TO 23m PARAPET A.O.D</p>	+6.60	<p>Drawings RR and NN</p> <p>North – 21.88m or 28.48m AOD</p> <p>South – 15.76m or 22.36m AOD</p>		<p>North – 22m from block datum, 28.60m AOD</p> <p>South – 16m from block datum, 22.6m AOD</p>
Block 14	<p>North - 6 STOREYS UP TO 22 m FROM BLOCK DATUM TO PARAPET UP TO 29m PARAPET A.O.D</p> <p>South - UP TO 16 m FROM BLOCK DATUM TO PARAPET UP TO 23m PARAPET A.O.D</p>	+6.60m	<p>Drawing RR</p> <p>North – 22.3m or 28.9m AOD</p> <p>South – 15.7m or 22.3m AOD</p>		<p>North – 22m from block datum, 28.60m AOD</p> <p>South – 14.5m from block datum, 21.1m AOD</p>
Block 15	<p>Main - UP TO 26 m FROM BLOCK DATUM TO PARAPET UP TO 33m PARPAET A.O.D</p> <p>Top floor - UP TO 30 m FROM BLOCK DATUM TO PARAPET UP TO 37m PARPAET A.O.D</p>	+6.6m	<p>Drawing PP</p> <p>Main – 24.57m or 31.17m AOD</p> <p>Top – 28.08m or 34.88m AOD</p>	There is a significant difference between what is illustrated in site elevations than those dimensions listed on drawings.	<p>Please see general note above</p> <p>Main – 26m from block datum, 32.6m AOD</p> <p>Top floor - 30m from block datum, 36.6m AOD</p>
Block 16	<p>North - UP TO 19 m FROM BLOCK DATUM TO PARAPET UP TO 26m PARAPET A.O.D</p> <p>South - UP TO 22 m FROM BLOCK DATUM TO PARAPET UP TO 29m</p>	+6.6m	<p>Drawing DD</p> <p>North – 18.15m or 24.75AOD</p> <p>South – 21.21m or 27.81m AOD</p>	Elevations show 1.25m lower than PR006.	<p>North – 22m from block datum, 28.60m AOD</p> <p>South – 19m from block datum, 25.6m AOD</p>

	PARAPET A.O.D				
Block 17	<p>North –UP TO 19 m FROM BLOCK DATUM TO PARAPET UP TO 26m PARAPET A.O.D</p> <p>South –UP TO 26 m FROM BLOCK DATUM TO PARAPET UP TO 33m PARAPET A.O.D</p>	+6.03m – +6.6m	<p>Drawing NN</p> <p>North - 18.24m or 24.84 AOD</p> <p>South – 24.97m or 31m AOD</p>	Elevations show 1.16m- 2m lower than PR006.	<p>North – 19m from block datum, 25.6m AOD</p> <p>South – 26m from block datum, 32.6m AOD</p>
Block 18	<p>North element West –UP TO 16 m FROM BLOCK DATUM TO PARAPET UP TO 23m PARAPET A.O.D</p> <p>Middle - UP TO 13 m FROM BLOCK DATUM TO PARAPET UP TO 19m PARAPET A.O.D</p> <p>South element Main –UP TO 19 m FROM BLOCK DATUM TO PARAPET UP TO 26m PARAPET A.O.D</p> <p>Top - UP TO 22 m FROM BLOCK DATUM TO PARAPET UP TO 29m PARAPET A.O.D</p>	+6.6m	<p>Drawing KK</p> <p>North element:</p> <ul style="list-style-type: none"> <li>• West element – 14.8m (21.1AOD)</li> <li>• Middle element – 11.9m (18.2AOD)</li> </ul> <p>South elevation</p> <ul style="list-style-type: none"> <li>• Main – 17.85m or 24.45m AOD</li> <li>• Top – 21.21m or 27.81m AOD</li> </ul>	<p>Disingenuous – whilst illustrative only – these are showing approx. 1m lower than max heights on the PR006 E</p>	<p>See general note above</p> <p>North element:</p> <ul style="list-style-type: none"> <li>• West element – 16m (22.6AOD)</li> <li>• Middle element – 13m (19.6m AOD)</li> </ul> <p>South elevation</p> <ul style="list-style-type: none"> <li>• Main – 19m or 25.6m AOD</li> <li>• Top – 22m or 28.6m AOD</li> </ul>
Block 19	<p>Main - 13 m FROM BLOCK DATUM TO PARAPET UP TO 19m PARAPET A.O.D</p> <p>Top floor - UP TO 16 m FROM BLOCK DATUM TO PARAPET UP TO 23m PARAPET A.O.D</p>	+6.6m	<p>Drawing QQ</p> <p>Main – 11.6m or 18.2m AOD</p> <p>Roof – 14.83m or 21.43m AOD</p>	<p>Disingenuous – elevations show a height significantly lower than PR006 E</p>	<p>Main – 11.15m or 17.75m AOD</p> <p>Roof – 16m or 22.6m AOD</p>
Block 20	<p>UP TO 13 m FROM BLOCK DATUM TO PARAPET UP TO 19m PARAPET A.O.D</p>	+6.3m	<p>EE</p> <ul style="list-style-type: none"> <li>• Shows – 12.28m or 18.58m AOD</li> </ul> <p>FF</p> <ul style="list-style-type: none"> <li>• Shows – 12.27m or 18.57m AOD</li> </ul>		<p>12.37m from block datum or 18.67m AOD</p>

Block 21	UP TO 13 m FROM BLOCK DATUM TO PARAPET UP TO 19m PARAPET A.O.D	+6.3m	EE  Shows – 12.28m or 18.58m AOD		12.37m from block datum or 18.67m AOD
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**Other comments:**

- Proposed site section FF – incorrectly labels Building 18 (as 19) – both are building 18.

S&P comment - Amended

- It is recommended that the site elevations / section drawings are resubmitted and are labelled with the ground level and maximum height – otherwise, the current site elevation plans are misleading.

S&P comment - Amended

- During the consideration of the original application, a condition was secured on the addendum to add the following height restrictions on Development Area 2 – refer to the table below. It is recommended this is followed through into the application and referred to in the Design Code:

Height restriction conditions in original application	Recommend the following are incorporated within the Design Code (these take into account the renumbering of buildings)
<ul style="list-style-type: none"> <li>• Building 18 (west elevation) – 14.4m –with any additional height (up to the maximum height specified in part (A) no less than 2m from the elevation.</li> <li>• Building 19 – (north west elevation) – 14.7m –with any additional height (up to the maximum height specified in part (A) no less than 2.5m from the elevation</li> <li>• Building 20 / 21 (north elevation) - 10.5m</li> </ul>	<ul style="list-style-type: none"> <li>• Building 19 – 14.4m –with any additional height (up to the maximum height no less than 2m from the elevation)</li> <li>• Building 18 – (north west elevation) – 14.7m –with any additional height (up to the maximum height no less than 2.5m from the elevation)</li> <li>• Building 20 / 21 (north elevation) - 10.5m</li> </ul>

S&P are largely happy with these conditions. However can they be amended to reflect that B19 is 14.5m from the block datum (21.1 AOD) as this is what we are currently showing in the drawings.

## **10. Flood Risk and Drainage Response Tracker**

Prepared by Waterman IE

Dated August 2022

(pages 260 – 270)

# Stag Brewery, Mortlake - Consultee Responses

## Flood Risk and Drainage Responses



**Date:** August 2022

**Client Name:** Reselton Properties Limited

**Document Reference:** WIE18671-114-BN-1.3.4-FR&D Response

This document has been prepared and checked in accordance with  
Waterman Group's IMS (BS EN ISO 9001: 2015, BS EN ISO 14001: 2015 and BS EN ISO 45001:2018)

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Issue	Prepared by	Checked & Approved by
03	Sean Whelan Senior Engineer 	Brendan McCarthy Technical Director 

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## 1. Introduction

- 1.1. The following documents were included as appendices to the Environmental Statement submitted in support of the two linked planning applications for the comprehensive redevelopment of the former Stag Brewery Site in Mortlake within the London Borough of Richmond upon Thames (LBRuT):
- Environmental Statement Appendix 12.2 - Drainage Strategy Reference WIE18671-104-R-11-2-2-DS; and
  - Environmental Statement Appendix 12.5 – Flood Defence Wall Note Reference WIE1871-104-BN-3-1-2-RiverWall.
- 1.2. This document sets out the comments received from the statutory consultees and Waterman's responses to these on behalf of the Applicant. Where appropriate, additional information will be provided subsequently as noted below.

## 2. LBRuT as Lead Local Flood Authority

### LBRuT Comment

- 2.1. MORE INFORMATION REQUIRED – the green roof and water butts should be shown on the drainage drawing.

### **Waterman Response**

- 2.2. Green roofs are proposed across the Site. The sitewide urban green factor drawing (P10736-00-004-GIL-0802) has been provided in Appendix K of the Drainage Strategy to reflect the location of the green roofs.
- 2.3. Water butts are also proposed across the Site. Water butts are not accounted for in terms of storage volume within the proposed drainage strategy as they are assumed to be full at the start of the design rainfall event, in line with the precautionary principle of the NPPF.
- 2.4. The exact number and location of the water butts cannot be confirmed at this stage. However, a note has been included on the drainage strategy drawing (18671-WIE-ZZ-ZZ-DR-D-92001) to reflect that water butts are proposed, and their location can be indicatively identified based on the roof areas within the masterplan, with the exact locations to be confirmed at detailed design

### **LBRuT Comment**

- 2.5. FAIL – The proposed runoff rate of 249l/s is much higher than the greenfield runoff rate of 44.1l/s. Consideration should be made to additional attenuation features such as blue roofs to reduce the proposed runoff rate. The site area used to calculate the 100 year greenfield runoff rate of 44.1l/s should be confirmed.

### **Waterman Response**

- 2.6. To meet Policy LP 21 of LBRuT's Draft Local Plan and in direct response to the comments received from the LLFA, the Drainage Strategy has been updated to achieve the greenfield runoff rate. Based on an area of 5.69ha currently draining into the Thames Water network, the existing discharge rate was calculated to be 812.3 l/s. The incorporation of permeable paving, rain gardens, and underground attenuation tanks achieves a reduction of surface water flows to the greenfield runoff rate of 37.4l/s, equal to a 95% reduction compared to the existing rate.

### **LBRuT Comment**

- 2.7. MORE INFORMATION REQUIRED – the existing (brownfield) runoff rate needs to be supplied for 1 in 1 year event and a 1 in 30 year event. All runoff rates should be presented in the SuDS proforma.

### **Waterman Response**

- 2.8. Table provided below (and within Appendix H – Surface Water Calculations) with greenfield, existing (brownfield), and proposed runoff/discharge rates from the site for a variety of return periods, in line with the SuDS proforma events. A constant proposed discharge rate has been assumed as a worst-case discharge for lower return period events. Despite the assumed higher discharge rate, 1 in 1 year runoff from the site is seen to reduce by 78%.

	Greenfield runoff rate (l/s/ha)	Existing (l/s/ha)	Required storage (m3)	Proposed discharge rate (l/s)	Percentage Reduction
Qbar	2.4	35.0	-	7.7	82%
1 in 1	2.1	43.3	-	7.7	78%
1 in 30	5.6	98.4	-	7.7	92%
1 in 100	7.7	142.8	-	7.7	95%
1 in 100+40CC	10.8	199.8	3,686	7.7	96%

### LBRuT Comment

- 2.9. The applicant has submitted information which has not sufficiently addressed policy relating to London Plan Policy SI 13. Until the above points are addressed, matters relating to volume control, Non-Statutory Technical Standards for SuDS S7-S9 and future maintenance have not been assessed due to their reliance on suitable proposals for sustainable drainage features and runoff rate restrictions.

### Waterman Response

- 2.10. Details of the London Plan: Policy SI 13 – Sustainable drainage are provided below for reference:
- A) Lead Local Flood Authorities should identify – through their Local Flood Risk Management Strategies and Surface Water Management Plans – areas where there are particular surface water management issues and aim to reduce these risks. Increases in surface water run-off outside these areas also need to be identified and addressed.
  - B) Development proposals should aim to achieve greenfield run-off rates and ensure that surface water run-off is managed as close to its source as possible. There should also be a preference for green over grey features, in line with the following drainage hierarchy:
    - 1) rainwater use as a resource (for example rainwater harvesting, blue roofs for irrigation)
    - 2) rainwater infiltration to ground at or close to source
    - 3) rainwater attenuation in green infrastructure features for gradual release (for example green roofs, rain gardens)
    - 4) rainwater discharge direct to a watercourse (unless not appropriate)
    - 5) controlled rainwater discharge to a surface water sewer or drain
    - 6) controlled rainwater discharge to a combined sewer.
  - C) Development proposals for impermeable surfacing should normally be resisted unless they can be shown to be unavoidable, including on small surfaces such as front gardens and driveways.
  - D) Drainage should be designed and implemented in ways that promote multiple benefits including increased water use efficiency, improved water quality, and enhanced biodiversity, urban greening, amenity and recreation.
- 2.11. Subsections B-D of the SI13 are applicable to developers.

- 2.12. Subsection B relates to the drainage hierarchy. The proposed surface water drainage for the Site follows this hierarchy, as laid out within the submitted and updated drainage strategy documents.
- 1) Water butts are proposed for the Site to facilitate the reuse of rainwater onsite.
  - 2) Infiltration to ground is not achievable due to underlying clay.
  - 3) Attenuation in green infrastructure features is proposed, where feasible. Green roofs are included across the Site and the drainage strategy drawing will be updated to reflect the location of these features.
  - 4) Rainwater is proposed to discharge directly to the River Thames in the north-east of the Site.
  - 5) There are areas of the Site where it is not feasible to discharge directly to the Thames due to constraints that would prevent the design of a sewer network that can drain via gravity. It is, therefore, proposed to discharge these areas of the Site to the Thames Water surface water sewer network that bounds the Site.
  - 6) It is not proposed to discharge any areas of the Site to a combined sewer.
- 2.13. Subsection C relates to the introduction of impermeable area. The existing Site is 100% impermeable. The development proposals will reduce the total impermeable areas through the introduction of green infrastructure such as green roofs, rain gardens, and permeable surfacing. The exact locations and extents of the proposed permeable surfacing are included within the drainage strategy (18671-WIE-ZZ-ZZ-DR-D-92001) and accompanying appendices.
- 2.14. Subsection D relates to multiple benefits. The proposed scheme provides multiple benefits through the introduction of green infrastructure such as green roofs, rain gardens, and permeable surfacing. The exact locations and extents of the proposed permeable surfacing are included within the drainage strategy drawing (ref: 18671-WIE-ZZ-ZZ-DR-D-92001) and associated appendices (Appendix A - Scheme Plans/Appendix K – Urban Greening Factor).
- 2.15. It should be noted that matters relating to volume control, Non-Statutory Technical Standards for SuDS S7-S9 and future maintenance have not been assessed by LBRuT due to their reliance on suitable proposals for sustainable drainage features and runoff rate restrictions. These items will be covered in the updated drainage strategy document to allow for assessment.

### **3. Environment Agency**

#### **EA Comment**

- 3.1 Holding objection until further clarification is received. It is unclear whether the proposed flood defence wall will provide a continuous, fit for purpose flood defence line and how the proposal differs from the wall configuration agreed between the EA and the applicant under previous application reference 18/0547/FUL.



### **Waterman Response**

- 3.2 The alignment of the Flood Defence Wall as shown on drawing numbers 38262/5520/09 and 38262/5520/23 in Appendix B has been updated to reflect the current proposals as Revision B. The updated document will be issued to LBRuT as part of the substituted document pack.

### **EA Comment**

- 3.3 Further information required to provide certainty that the proposed development will be safe for its lifetime from flooding in line with Paragraphs 159 and 164 of the NPPF, and Policy LP 21 of the Richmond Local Plan (2018).

### **Waterman Response**

- 3.4 The Flood Risk Assessment submitted with the planning application has been undertaken in line with Paragraphs 159 to 164 of the NPPF, and Policy LP 21 of the Richmond Local Plan (2018).
- 3.5 It was confirmed through correspondence with the EA (email received on 23 February 2022 ref KSL 250778 AC) that the Product 4 flood level data referenced in the FRA was still appropriate for use:

*“We can confirm that the Product 4/8 that was created in 2017 (KSL 52746 CG) is up-to-date as uses the Thames Tidal Upriver Breach Inundation modelling 2017 which is currently used.”*

- 3.6 We seek further clarity on what further information is required in order to demonstrate that the Development is in accordance with planning policy.

### **EA Comment**

- 3.7 Thames Tidal Flood Defences - Contradictory information has been submitted with regards to the flood defence. For example, Appendix 12.5: Flood Defence Wall Summary Note [Doc Ref: WIE1871-104-BN-3-1-2-RiverWall] by Waterman Infrastructure & Environment Limited dated 22 February 2022 includes two drawings outlining different proposed locations for the final flood defence line. The drawing numbers are:

- 1006 Rev A07 by Waterman Infrastructure & Environment Limited dated July 2017.
- 38262/5520/09 by Stantec dated 18 January 2022.

### **Waterman Response**

- 3.8 The alignment of the Flood Defence Wall as shown on drawing numbers 38262/5520/09 and 38262/5520/23 in Appendix B has been updated to reflect the current proposals as Revision B. The updated document will be issued to LBRuT as part of the submitted document pack.

### **EA Comment**

- 3.9 Overcoming EA Objection
- i) Provide further clarification as to which drawings of the flood defence line are to be incorporated into the final design.

- ii) Any drawings of flood defence line configurations not being incorporated into the final design should be withdrawn from the submitted information or amended to show the proposed configuration.
- iii) Confirmation that the configuration of the flood defence line will be as agreed previously should also be provided.
- iv) Provide all drawings of the Thames Tidal flood defence are included within Appendix 12.5.
- v) There has been significant correspondence between EA and the applicant since 2016 regarding the configuration of the flood defence wall in any new development at this site. We would welcome an opportunity to discuss the contents of this letter in greater detail.

#### **Waterman Response**

- 3.10 i-iv) The alignment of the Flood Defence Wall as shown on drawing numbers 38262/5520/09 and 38262/5520/23 in Appendix B of ES Appendix 12.5 has been updated to reflect the current proposals as Revision B. The updated document will be issued to LBRuT as part of the substituted document pack.
- 3.11 v) Given the above comments have been resolved through re-issue of the drawings and no further updates to the flood defence wall have been undertaken since previous correspondence, it is not considered necessary to further discuss the flood defence wall at this stage.

## **4. Thames Water**

#### **TW Comment**

- 4.1 Waste Comments: With the information provided, Thames Water has been unable to determine the Foul water infrastructure needs of this application. Thames Water has contacted the developer in an attempt to obtain this information and agree a position for FOUL WATER drainage but have been unable to do so in the time available.

#### **Waterman Response**

- 4.2 Further information is provided within the updated drainage strategy document and appendices so that the foul water needs of the proposed development are clearly understood.

#### **TW Comment**

- 4.3 SURFACE WATER drainage: Thames Water would advise that if the developer follows the sequential approach to the disposal of surface water we would have no objection.

#### **Waterman Response**

- 4.4 Accepted.

### TW Comment

#### 4.5 Water Comments:

- i) There are water mains crossing or close to your development. Thames Water do NOT permit the building over or construction within 3m of water mains
- ii) The proposed development is located within 5m of a strategic water main. Thames Water do NOT permit the building over or construction within 5m, of strategic water mains. Recommend condition.
- iii) Following initial investigations, Thames Water has identified an inability of the existing water network infrastructure to accommodate the needs of this development proposal. Thames Water have contacted the developer in an attempt to agree a position on water networks but have been unable to do so in the time available

### Waterman Response

- 4.6 i) As reported in the Structural Impact Assessment, two 36-inch water mains pipes run close to the Site along Mortlake High Street and must be protected against damage from the works associated with the Development. Concerns are from higher loads due to plant movements and the new foundations proposals causing ground movements/vibrations. Unrestricted access must be maintained at all times for Thames Water maintenance and repair of the asset during the works. To eliminate this risk, an accurate survey will be carried out to ascertain the exact location of the water mains relative to the buildings/foundations. Protection will be installed against plant movements and specific non-impact construction methods have been selected. This will be detailed within the Construction Environmental Management Plan (CEMP). The further survey and CEMP will be secured as part of a planning condition.
- 4.7 ii) The proposed planning condition from Thames Water as follows is agreed with the following added suggestion: *"No construction shall take place within 5m of the water main **unless otherwise agreed with the local planning authority in consultation with Thames Water.** Information detailing how the developer intends to divert the asset / align the development, so as to prevent the potential for damage to subsurface potable water infrastructure, must be submitted to and approved in writing by the local planning authority in consultation with Thames Water."*
- 4.8 iii) As reported in the Foul Sewage and Utilities Assessment prepared by Hoare Lea, a budget quote was received from Thames Water for the original application in 2017 detailing the new supply requirements. It is acknowledged that an infrastructure network analysis to verify the points of connection into the Thames Water mains will need to be undertaken once planning permission is received, to be secured through a suitably worded planning condition.

### TW Comment

#### 4.9 Groundwater:

- i) Thames Water expect the developer to demonstrate what measures will be undertaken to minimise groundwater discharges into the public sewer.
- ii) Informatives:

- Where the developer proposes to discharge to a public sewer, prior approval from Thames Water Developer Services will be required.
  - There are public sewers crossing or close to your development. The applicant is advised to read the guide working near or diverting our pipes.
  - A Groundwater Risk Management Permit from Thames Water will be required for discharging groundwater into a public sewer
- iii) Conditions: No construction shall take place within 5m of the water main. Information detailing how the developer intends to divert the asset / align the development, so as to prevent the potential for damage to subsurface potable water infrastructure, must be submitted to and approved in writing by the local planning authority in consultation with Thames Water

### **Waterman Response**

- 4.10 Relates to post planning activities – to be dealt with at detailed design/construction stage post planning.
- 4.11 As above, the proposed planning condition is agreed.

### **TW Comment**

- 4.12 Foul water:
- i) Need to confirm the foul water manhole reference numbers which the development proposes to connect into.
  - ii) Need to confirm which areas of the development will drain to each of those connection points to the public foul sewer system, to allow Thames Water to calculate the impact of the additional foul flows on the local foul sewer system.
  - iii) specify either the anticipated flow rate through each proposed foul water manhole, or the number and type of buildings (e.g. 300 dwellings, 500m<sup>2</sup> of offices).
  - iv) Regarding Surface Water, the site plans state that some surface water currently enters the foul sewer system and that this will be removed. Confirm what flow rate will be removed, and from which section of the foul sewer?
  - v) demonstrate what measures will be undertaken to minimise groundwater discharges into the public sewer.
  - vi) Agree to the following, that would be secured via conditions:
    - incorporate within proposal, protection to the property to prevent sewage flooding, by installing a positive pumped device (or equivalent reflecting technological advances), on the assumption that the sewerage network may surcharge to ground level during storm conditions.
    - There are public sewers crossing or close to your development. Require condition regarding piling method statement

### **Waterman Response**

- 4.13 The Drainage Strategy document has been updated to provide the following details for the proposed foul water drainage catchments:
- i) Foul water manhole reference numbers;
  - ii) Connections to the public foul sewer system are indicated on the foul drainage strategy drawing (18671-WIE-ZZ-ZZ-DR-D-92002) in Appendix E;
  - iii) The anticipated flow rate from each development block is provided within Appendix I, along with the proposed TW manhole they would discharge to. Additionally, the development plans (Appendix A) and the foul calculations (Appendix I) provide sufficient information in terms of residential units per block and proposed commercial floorspace such that the foul flows can be calculated;
  - iv) It is understood from the existing onsite drainage records (Appendix C) that there are some surface water connections into the foul sewer. The proposed surface water drainage strategy will remove these connections and therefore reduce the contribution to the foul network during rainfall events. The exact reduction in surface water contribution has not been calculated as the impermeable areas contributing runoff to the foul network are yet to be verified.
  - v) Refer to paragraph 4.10 above.
  - vi) Noted.

## **5. Marine Management Organisation**

### **MMO Comment**

- 5.1 Four comments were received, thus:
- a) Works below mean high water mark may require a Marine License.
  - b) A wildlife licence is required for activities that would affect a UK / European protected marine species.
  - c) Environmental Impact Assessment – If this consultation elates to a project capable of falling within either set of EIA regulations, then it is advised that the applicant submit a request directly to the MMO to ensure any requirements under the MWR are considered adequately at the following link.
  - d) Marine Planning - Under the Marine and Coastal Access Act 2009 ch.4, 58, public authorities must make decisions in accordance with marine policy documents and if it takes a decision that is against these policies it must state its reasons.

### **Waterman Response**

- 5.2 Item a) is of relevance to the drainage strategy. It is noted that a Marine Licence will be required for works below the mean high-water mark. Further consultation with the MMO will be carried out to

agree the best outcome in terms of works within their jurisdiction relating to the proposed drainage outfalls, separate to the planning process.

## **11. Health and Safety Executive Tracker**

Prepared by Hoare Lea

Dated 14 September 2022

(pages 271 – 294)

## Memo

To: Ciprian Burtilla (Health and Safety Executive)

From: Eric Swainson, Principal Fire Engineer

Reviewed: Miller Hannah, Director

Date: 14 September 2022

Project: Stag Brewery

File ref: MEM-1920618-02-ES-20220914-HSE Responses-Rev04.docx

## Responses to the HSE Substantive Response for Stag Brewery

### Introduction

The Stag Brewery is a proposed multi-storey, multi-building residential-led mixed use development located in the London Borough of Richmond upon Thames. The development is considered to contain several relevant buildings which need to be considered under Planning Gateway One. The Health and Safety Executive (HSE) has reviewed the gateway one fire safety statement (planning reference number: 22/0900/OUT) as part of the proposed development of The Stag Brewery site in Mortlake and has provided the following comments on 9<sup>th</sup> May 2022.

Hoare Lea Fire Engineering Group thanks the HSE for their consultation and acknowledge receipt of these comments and have taken them into account as part of the updated fire strategy design. The following responses indicate how these comments have been addressed and/or where further clarification has been requested. The HSE comments are provided in black with the responses from Hoare Lea Fire Engineering Group (HLF) highlighted in green, the paragraph numbers below correspond to those used in the HSE Substantive Response.

### Responses

1.3 Regarding the first part of the hybrid application for the detailed application, it is noted that the proposed buildings contain blocks which are served by single staircases. In a fire scenario, the proposed single staircases operate as the escape stair as well as the firefighting stair.

HLF: Noted. Just for clarity a firefighting shaft will only be provided for blocks 2, 4, 7, 8, 10-18 which have a top occupied storey above 18m and as such the stair shaft will be designed as a firefighting shaft. In all other blocks the stair will be designed as a protected shaft. Buildings 13-18 form part of the outline application.

1.4 The buildings 2, 3, 6, 7, 8, 11 & 12 are connected by way of a basement containing a carpark and ancillary areas.

HLF: Please refer to updated plans prepared by Squires & Partners a drawing schedule is appended to this document. Stairs serving the basement carpark have been rearranged such that they are





independent from the stairs serving the residential levels. There are no internal connections between the basement carpark stairs and the residential stairs, this is in line with the recommendations in current guidance.

1.5 The fire statement (section 7) and the plan drawings indicate that the single staircase of buildings 2, 7, 8, 11 & 12 descend to the basement level. The basement contains various ancillary areas such as a large carpark, multiple plant rooms, cycle stores and refuse areas, which connect with the single staircases by way of lobbies/corridors.

HLF: Noted, the plans have been updated such that the Stairs serving the basement carpark are independent from the stairs serving the residential levels. There are no internal connections between the basement carpark stairs and the residential stairs, this is in line with the recommendations in current guidance.

1.6 The fire safety standard states that a single stair should not serve a basement level. Moreover, where a staircase forms part of the only escape route from a flat, it should not serve ancillary accommodation (applicable in addition to buildings 4 and 10). Resolving these issues will affect land use planning considerations such as the design, layout and appearance of the development if, for example, separate stairs are to be provided for the basement level and no connection with the single stairs is ensured.

HLF: Noted and agreed, the plans have been updated such that the Stairs serving the basement carpark are independent from the stairs serving the residential levels. There are no internal connections between the basement carpark stairs and the residential stairs, this is in line with the recommendations in current guidance. These changes have been implemented with minimal changes to the external layout of the building, the full extent of which can be seen in the updated plans provided by Squires & Partners.

1.7 The plan drawings illustrate that the lifts in buildings 2, 7, 8, 11 & 12 descend to the basement level. A lift should not continue down to serve a basement storey if it is in a building, or part of a building, served by only one escape staircase. Resolving this issue may affect land use planning considerations such as the design, layout and appearance of the development if, for example, separate lifts are to be provided for the basement.

HLF: Noted, the plans have been updated such that the lifts serving the basement carpark are independent from the lifts serving the residential levels. The lifts serving the basement carpark will open into a lobby which is fire separated from the areas in which the lifts serving the above ground levels opens into. These changes have been implemented with minimal changes to the external layout of the building, the full extent of which can be seen in the updated plans provided by Squires & Partners.

1.8 The basement plan drawing of Area 1 illustrates multiple refuse stores designated to serve the above residential buildings. Due to the fire risks associated with waste, refuse stores should be approached solely from the outer air and should be separated from other parts of the building. Accordingly, design changes necessary to ensure appropriate location and separation of the bin stores will affect land use planning considerations such as the design and appearance of the development.

HLF: Noted, the plans have been updated such that all refuse stores are accessed from external only. Please refer to the plans prepared by Squires & Partners a drawing schedule is appended to this document. This arrangement is considered to meet the HSE's recommendations above regarding access to the refuse stores.

1.9 The planning statement (section 12.36) and the plan drawings indicate that the proposed development contains residential units which are designed as wheelchair user units. However, the fire statement (section 6) states that there are no such units ("none") and it does not provide information about any wheelchair user refuge in case of fire. When establishing the refuge areas, consideration should be given to the location of the dry riser outlets. The presence of charged fire hoses could hinder effective use of the disabled refuge; likewise, the use of a refuge could prevent access to the dry riser outlet. Ensuring suitable provision of disabled refuges may affect land use planning considerations such



as the design and layout of the building as well as the health, safety and wellbeing of the future intended occupants.

HLF: Noted and agreed. The fire statement produced to describe compliance with the London Plan Policy D5 and D12 which was submitted as part of this application provides additional details with regards to the provision of refuge areas. This has been repeated below for completeness:

*Furthermore, one lift per block will be provided as a lift with enhanced facilities for evacuation to facilitate the evacuation of mobility impaired occupants and meet the recommendations of Policy D5 (inclusive design) of the London Plan. In order to facilitate the use of the evacuation lift all of the residential stairs should be provided with refuge spaces with minimum dimensions of 900mm x 1400mm outside of clear escape width of the stair. The refuge should be provided with an emergency voice communication (EVC) system, designed and installed in accordance with BS 5839-9:2011. The management procedures of the evacuation lifts will be developed during the design stage.*

These refuge spaces will be shown on the updated plans provided. Please refer to the plans prepared by Squires & Partners a drawing schedule is appended to this document.

1.10 Regarding the second part of the hybrid application for the outline application with all matters reserved, it is noted that there are some plan drawings illustrating the buildings design in principle. The buildings 13, 15, 16 & 17 are connected by way of a basement containing a carpark and ancillary areas. It appears that these buildings contain blocks with single staircases which, in a fire scenario, operate as the escape stair as well as the firefighting stair.

HLF: Please refer to updated plans prepared by Squires & Partners a drawing schedule is appended to this document. Stairs serving the basement carpark are independent from the stairs serving the residential levels. There are no internal connections between the basement carpark stairs and the residential stairs, this is in line with the recommendations in current guidance.

1.11 The fire statement (section 7) and the plan drawings indicate that the single staircase of buildings 13, 15, 16 & 17 descend to the basement level. The basement contains various ancillary areas such as a large carpark, multiple plant rooms, cycle stores and refuse areas, which connect with the single staircases by way of lobbies/corridors.

HLF: Please refer to updated plans prepared by Squires & Partners a drawing schedule is appended to this document. Stairs serving the basement carpark are independent from the stairs serving the residential levels. There are no internal connections between the basement carpark stairs and the residential stairs, this is in line with the recommendations in current guidance.

1.12 The fire safety standard states that a single stair should not serve a basement level. Additionally, where a staircase forms part of the only escape route from a flat, it should not serve ancillary accommodation. Resolving these issues will affect land use planning considerations such as the design, layout and appearance of the development if, for example, separate stairs are to be provided for the basement level and no connection with the single stairs is ensured.

HLF: Please refer to updated plans prepared by Squires & Partners a drawing schedule is appended to this document. Stairs serving the basement carpark are independent from the stairs serving the residential levels. There are no internal connections between the basement carpark stairs and the residential stairs, this is in line with the recommendations in current guidance.

1.13 The plan drawings illustrate that the lifts in buildings 13, 15, 16 & 17 descend to the basement level. A lift should not continue down to serve a basement storey if it is in a building, or part of a building, served by only one escape staircase. Resolving this issue may affect land use planning considerations such as the design, layout and appearance of the development if, for example, separate lifts are to be provided for the basement.



HLF: Noted, the plans have been updated such that the lifts serving the basement carpark are independent from the lifts serving the residential levels. The lifts serving the basement carpark will open into a lobby which is fire separated from the areas in which the lifts serving the above ground levels opens into. These changes have been implemented with minimal changes to the external layout of the building, the full extent of which can be seen in the updated plans provided by Squires & Partners.

1.14 The basement plan drawing for Area 2 illustrates multiple refuse stores designated to serve the above residential buildings. Due to the fire risks associated with waste, refuse stores should be approached solely from the outer air and should be separated from other parts of the building. Accordingly, design changes necessary to ensure appropriate location and separation of the bin stores will affect land use planning considerations such as the design and appearance of the development.

HLF: Noted, the plans have been updated such that all refuse stores are accessed from external only. Please refer to the plans prepared by Squires & Partners a drawing schedule is appended to this document. This arrangement is considered to meet the HSE's recommendations above regarding access to the refuse stores.

1.15 Because the second part of the hybrid application for the outline application has all matters reserved, HSE is unable to provide a full comment for this part. Should the Local Planning Authority be minded to grant outline planning permission, we strongly recommend the following:

- the outline planning permission is subject to a suitable condition requiring the submission of a satisfactory fire statement with any reserved matters application, and
- that HSE is consulted in conjunction with the Local Planning Authority's consideration of any reserved matters application.

HLF: Noted

1.16 This would ensure the purpose of HSE being made a statutory consultee for such applications is achieved.

HLF: Noted

1.17 It is recommended that the applicant uses the fire statement form available on gov.uk to provide the fire safety information.

HLF: Noted

The following points do not contribute to HSE's overall headline response and are intended only as advice for the applicant. These comments identify items that could usefully be considered now to reduce the risk of making changes to the design at a later stage, which could have planning implications.

HLF: Noted, however, these comments have been considered as part of the fire engineered design and the following commentary is provided.

2.1. Regarding the basement carparks for Area 1 and Area 2, the planning statement (section 15.15) states that "20% of car parking spaces will be provided with active electric charging provision, and 100% of the remaining spaces will be provided with passive electric charging provision". It may be advisable to consider the risk to fire safety by the presence of the electric vehicles (EVs) in the basement carparks as well as the presence of electric bikes because they contain lithium-ion batteries. Lithium-ion batteries may suffer thermal runaway and cell rupture, releasing large volume of toxic gases, heat and smoke before catching fire as well as afterwards. When they burn, a large amount of water is needed to flow on the batteries, however, fire keeps flaring up even after it appears to be extinguished. Furthermore, there is a danger of electrical shock for firefighters tackling a fire due to the high voltage used in EVs. Any consequent design changes may affect land use planning considerations such as layout, appearance, and car parking provision of the development.



HLF: Noted and agreed. It is noted that as the use of electric cars is generally in its infancy a consensus on the additional provisions required to mitigate and protect the use of electric vehicles is still subject to considerable debate in the fire engineering industry. Notwithstanding the fire strategy design has considered the presence of electric vehicles and has provided the following fire safety features:

- All electric vehicle charging points will be provided with an automatic shutoff connected to the alarm system within the building. On activation of a detector this will shutoff power supply to all electric vehicle charging stations.
- The car parks will be protected by an automatic sprinkler system designed and installed in accordance with BS EN 12845.
- The car parks will be provided with a mechanical smoke ventilation system.
- As the design progresses further considerations will be given to volume of stored water to supply the sprinkler system and the extract rate of the smoke ventilation system
- Extra consideration will be given to the lobby protection to the stairs serving the basement carpark particularly with regards to the smoke ventilation provided to these protected lobbies.
- Car parks will be provided with ramped access such that the fire service would be able to remove an electric vehicle directly to external air after extinguishing a fire to prevent any hazards from re-ignition.
- Cycle stores will be provided with fire resisting construction separating them from other areas.
- All cycle stores will be separated from the stairs by means of a fire protected smoke ventilated lobby.
- Additional building management features to prevent unattended E-bike charging within the cycle store will be considered and incorporated as appropriate as the design develops.

2.2. The plan drawings illustrate that the buildings 2, 7 & 8 contain firefighting lifts with dual entry. The fire safety standard states that the use of dual entry firefighting lifts is not recommended in residential buildings. Any consequent changes, in rectifying this may affect land use planning considerations such as design and appearance of the development, including the main entrance arrangements more generally.

HLF: Noted and agreed, this was an error on the plans, all firefighting lifts will be single entry only. Please refer to the plans prepared by Squires & Partners a drawing schedule is appended to this document.

2.3. The fire statement (section 8) states that “certain corridors have extended travel distances in a single direction and is addressed with a fire engineered justification including the provision of additional smoke ventilation.” However, if an engineered approach to fire safety is applied, then a “Qualitative Design Review” (QDR) is needed to determine whether the fire safety provisions are appropriate. As part of the hazard assessment process, an assessment of “what if” events should be made to identify system failures or foreseeable events that might have a significant influence on the outcome of the study. An example could be “what if” the power supply to smoke vents fails?

HLF: It is noted that QDRs are only specifically referenced in BS 9991 for buildings in excess of 50m. None of the proposed buildings within the development are close to this height and all buildings are proposed to be less than 30m. At the start of the design process for the Stag Brewery development the HSE’s role as a consultee on the Planning Gateway One process was not yet established. Hence the expectations from the HSE expressed above, which the HSE have acknowledged are more stringent than the requirements of code guidance, were not known at the start of design. On this basis a QDR was not carried out for the building prior to the first submission to the PGO team.

Notwithstanding the above, the concern noted above by the HSE is acknowledged and as such it is proposed to carry out a preliminary QDR focusing on the extended travel distances at this stage of the design. As the design for the building develops a full QDR can be carried out considering all aspects of the development (not just the extended corridor travel distances).



2.4. From the information provided on the fire statement it does not appear that a QDR has been undertaken, such that it has informed the design presented to the LPA. In circumstances such as this, best practice is for a QDR to be undertaken concurrently with design development, prior to the submission of a planning application. This approach would provide explanatory information to support the planning application. The outcome of the QDR could result in design changes which may affect land use planning considerations.

HLF: As noted above a QDR was not carried out for the building prior to the first submission to the PGO team.

This was on the basis that extended travel distances within residential single stair buildings based on provision of an enhanced smoke ventilation system is a well understood and long standing fire engineered design. The proposed enhanced smoke ventilation mitigation measures have been subject to independent research carried out by the system manufacturers and extensive fire and smoke modelling carried out by fire engineers. As such the hazards of the proposed design and the benefits and limitations of the proposed mitigation methods are well understood.

Notwithstanding the above, the concern noted above by the HSE is acknowledged and as such it is proposed to carry out a preliminary QDR focusing on the extended travel distances at this stage of the design. As the design for the building develops a full QDR can be carried out considering all aspects of the development (not just the extended corridor travel distances).

BS 7974 acknowledges when describing a QDR that the first stage of any engineering design is to establish the basic parameters and identification of any overriding constraints. This is a reasonable expectation for any design which deviates from the recommendations in code guidance.

The extended travel distance design has been considered in terms of the holistic building design from the early stage and the following fire safety enhancements will be provided as part of the design:

- All corridors provided with an extended travel distance in excess of 15m will be provided with a Double Reversible Mechanical Extract (DRME) system. This system has been demonstrated on multiple buildings by Computational Fluid Dynamics modelling to provide tenable conditions for means of escape and fire service access.
- Where extended travel distances are present smoke shafts will be positioned as close to the end of the common corridor as possible.
- All apartments will be provided with a category LD1 detection and alarm system and residential sprinkler protection throughout.

As the design develops the extended travel distances within the residential common corridors will be assessed in more detail and the fire engineered design will be examined in more detail. This process will include production of a Computational Fluid Dynamics (CFD) analysis of the proposed design. Before this model is created a scoping document will be produced. This document defines the fire hazards associated with the proposed design, establishes the performance criteria of the system and provides the proposed design solutions to mitigate the extended travel distance. The CFD analysis will consider the internal layouts of apartments and will consider the worst case fire scenarios both in terms of smoke spread into the stair and longest travel distance to the stair.

As the internal corridor layout within a building can change significantly between pre-planning and detailed design stages, full modelling of the proposed extended travel distance arrangement will not be carried out until the internal layout of the building is frozen at the detailed design stage.

2.5. The plan drawings of building 4 illustrate the firefighting stairs and lifts to run blind through the 4th floor. The fire statement (section 4) states that no formal consultation has been undertaken to date. However, it should be determined that there is adequate access for fire-fighting personnel to set up a bridgehead on any required floor. Additionally, the fire safety standard states that where lifts are proposed to run blind there should be early consultation with the local fire and rescue service. Any



subsequent changes may affect land use planning consideration such as the design and layout of the development

HLF: Noted and agreed, this was an error on the plans and has been updated and the firefighting stair and lift will serve all levels. Please refer to the plans prepared by Squires & Partners a drawing schedule is appended to this document.

2.6. The fire statement (section 13) states that “some existing public hydrants are provided within 90m of all blocks. Where this is not the case, additional private hydrants will be provided.” However, the fire service site plan (fire statement, section 14) does not illustrate the water hydrants’ locations that the proposed development relies on and associated distances.

HLF: Noted, the locations of the existing hydrants will be provided and attached to these responses (please refer to Appendix B). It is noted that the design has not yet progressed to a stage where the location of new hydrants has been provided as the general landscape design is still in an early stage.

However, the provision of hydrants within the requirements of current code guidance; within 90m of the dry riser inlet to each block can be made a condition of the planning application.

Note that as the design is developed further new hydrants will be provided such that the maximum distance of 90m to all blocks is not exceeded.

2.7. It is noted that some buildings are not relevant buildings as their height is under 18 m, however, they are within the curtilage of the relevant buildings. The following advice is offered with that context in mind.

HLF: See response to 2.10 below

2.8. The fire statement (section 7) and the plan drawings indicate that the single staircase of buildings 3 and 6 descend to the basement level. The basement contains multiple ancillary areas such as a large carpark, multiple plant rooms, cycle stores and refuse areas, which connect with the single staircases by way of lobbies/corridors.

HLF: Stairs serving the basement carpark are independent from the stairs serving the residential levels, this is in line with the recommendations in current guidance. These changes have been implemented with minimal changes to the external layout of the building, the full extent of which can be seen in the updated plans provided by Squires & Partners.

It is noted that consideration has also been given to the fact that blocks both above and below 18m are connected via underground carparks and so do not have a continuous line of vertical separation and as such all blocks which share access to the carparks will be treated as over 18m in terms of external wall design.

2.9. The fire safety standard states that a single stair should not serve a basement level. Moreover, where a staircase forms part of the only escape route from a flat, it should not serve ancillary accommodation (applicable in addition to building 9). Resolving these issues will affect land use planning considerations such as the design, layout and appearance of the development if, for example, separate stairs are to be provided for the basement level and no connection with the single stairs is ensured.

HLF: Stairs serving the basement carpark are independent from the stairs serving the residential levels, this is in line with the recommendations in current guidance. These changes have been implemented with minimal changes to the external layout of the building, the full extent of which can be seen in the updated plans provided by Squires & Partners.

It is noted that consideration has also been given to the fact that blocks both above and below 18m are connected via underground carparks and so do not have a continuous line of vertical separation and as



such all blocks which share access to the carparks will be treated as over 18m in terms of external wall design.

2.10. The plan drawings illustrate that the lifts in buildings 3 and 6 descend to the basement level. A lift should not continue down to serve a basement storey if it is in a building, or part of a building, served by only one escape staircase. Resolving this issue may affect land use planning considerations such as the design, layout and appearance of the development if, for example, separate lifts are to be provided for the basement.

HLF: Stairs serving the basement carpark are independent from the stairs serving the residential levels. The lifts serving the basement carpark are independent from the lifts serving the residential levels. The lifts serving the basement carpark will open into a lobby which is fire separated from the areas in which the lifts serving the above ground levels open into. This is in line with the recommendations in current guidance. These changes have been implemented with minimal changes to the external layout of the building, the full extent of which can be seen in the updated plans provided by Squires & Partners.

It is noted that consideration has also been given to the fact that blocks both above and below 18m are connected via underground carparks and so do not have a continuous line of vertical separation and as such all blocks which share access to the carparks will be treated as over 18m in terms of external wall design.

## **Conclusion**

It is the considered opinion of Hoare Lea Fire Engineering Group that the responses detailed above fully address the concerns raised by the HSE as part of their Planning Gateway One review process. The proposals have considered fire safety at the earliest stage, and the further development of the fire strategy will be based upon these principles. The fire strategy will be further developed for submission to the Approving Authority at the appropriate time and will meet the functional requirements of the Building Regulations 2010, taking recommendations from BS 9999:2017, BS 9991:2015, the comments received by the HSE and the requirements of Policy D5 and D12 of The London Plan.



## **Appendix A – Drawing Register**



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**Masterplan (8 No. Drawings)**

	<b>Drawing Number</b>	<b>Scale at A1</b>	<b>LBRuT 2 Submission Revision</b>	<b>LBRuT 2 Amendments Revision</b>	<b>Comments</b>
Proposed Masterplan Ground Floor Level	C645_MP_P_00_001	1:1250	E	F	Layout changes in response to HSE Gateway 1 comments
Proposed Masterplan Typical Floor Level	C645_MP_P_TY_001	1:1250	E	F	Layout changes in response to HSE Gateway 1 comments
Proposed Development Area 1 Ground Level Plan	C645_Z1_P_00_001	1:500	D	E	Layout changes in response to HSE Gateway 1 comments
Proposed Development Area 1 Typical Level Plan	C645_Z1_P_TY_001	1:500	D	E	Layout changes in response to HSE Gateway 1 comments
Proposed Development Area 2 Ground Level Plan	C645_Z2_P_00_002	1:500	D	E	Layout changes in response to HSE Gateway 1 comments
Proposed Development Area 2 Ground Level Plan	C645_Z2_P_00_001	1:500	D	E	Layout changes in response to HSE Gateway 1 comments
Proposed Development Area 2 Typical Level Plan	C645_Z2_P_TY_002	1:500	D	E	Layout changes in response to HSE Gateway 1 comments
Proposed Development Area 2 Typical Level Plan	C645_Z2_P_TY_001	1:500	D		

**Basement Plans (2 No. Drawings)**

	<b>Drawing Number</b>	<b>Scale at A1</b>	<b>LBRuT 2 Submission Revision</b>	<b>LBRuT 2 Amendments Revision</b>	<b>Comments</b>
Proposed Development Area 1 Basement Plan	C645_Z1_P_B1_001	1:500	E	F	Layout changes in response to HSE Gateway 1 comments
Proposed Development Area 2 Basement Plan	C645_Z2_P_B1_001	1:500	E	F	Layout changes in response to HSE Gateway 1 comments

**Basement Sections (3 No. Drawings)**

	<b>Drawing Number</b>	<b>Scale at A1</b>	<b>LBRuT 2 Submission Revision</b>	<b>LBRuT 2 Amendments Revision</b>	<b>Comments</b>
Proposed Development Area 1 Basement Section AA	C645_Z1_S_B1_001	1:200	C		
Proposed Development Area 1 Basement Section BB	C645_Z1_S_B1_002	1:500	C		
Proposed Development Area 2 Basement Section CC	C645_Z2_S_B1_001	1:200	C		

**Building Plans (67 No. Drawings)**

	<b>Drawing Number</b>	<b>Scale at A1</b>	<b>LBRuT 2 Submission Revision</b>	<b>LBRuT 2 Amendments Revision</b>	<b>Comments</b>
Building 1 - Proposed Ground Floor Plan	C645_B01_P_00_001	1:100	E	F	Massing of Building 1 amended, layout amendments to respond to consultee and HSE Gateway 1 comments
Building 1 - Proposed First Floor Plan	C645_B01_P_01_001	1:100	E	F	Massing of Building 1 amended, layout amendments to respond to consultee and HSE Gateway 1 comments

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Building 1 - Proposed Second Floor Plan	C645_B01_P_02_001	1:100	E	F	Massing of Building 1 amended, layout amendments to respond to consultee and HSE Gateway 1 comments
Building 1 - Proposed Third Floor Plan	C645_B01_P_03_001	1:100	F	G	Massing of Building 1 amended, layout amendments to respond to consultee and HSE Gateway 1 comments
Building 1 - Proposed Basement Plan 1	C645_B01_P_B1_001	1:100	E	F	Massing of Building 1 amended, layout amendments to respond to consultee and HSE Gateway 1 comments
Building 1 - Proposed Basement Plan 2	C645_B01_P_B2_001	1:100	E	F	Massing of Building 1 amended, layout amendments to respond to consultee and HSE Gateway 1 comments
Building 1 - Proposed Roof Plan	C645_B01_P_RF_001	1:100	F	G	Massing of Building 1 amended, layout amendments to respond to consultee and HSE Gateway 1 comments
Building 2 - Proposed Ground Floor Plan	C645_B02_P_00_001	1:125	E	F	Layout changes in response to HSE Gateway 1 comments
Building 2 - Proposed Typical Floor 1 (Second to Fifth Levels)	C645_B02_P_TY1_001	1:125	E	F	Layout changes in response to HSE Gateway 1 comments
Building 2 - Proposed Typical Floor 2 (First and Sixth Levels)	C645_B02_P_TY2_001	1:125	E	F	Layout changes in response to HSE Gateway 1 comments
Building 2 - Proposed Seventh Floor Plan	C645_B02_P_07_001	1:125	E	F	Layout changes in response to HSE Gateway 1 comments
Building 2 - Proposed Eighth Floor Plan	C645_B02_P_08_001	1:125	E	F	Minor changes to tower design and roof plant
Building 2 - Proposed Roof Plan	C645_B02_P_RF_001	1:125	E	F	Minor changes to tower design and roof plant
Building 3 - Proposed Ground Floor Plan	C645_B03_P_00_001	1:100	E	F	Layout changes in response to HSE Gateway 1 comments
Building 3 - Proposed Typical Floor (First to Third Levels)	C645_B03_P_TY_001	1:100	E	F	Layout changes in response to HSE Gateway 1 comments
Building 3 - Proposed Fourth Floor Plan	C645_B03_P_04_001	1:100	A	B	Layout changes in response to HSE Gateway 1 comments
Building 3 - Proposed Fifth Floor Plan	C645_B03_P_05_001	1:100	E	F	Layout changes in response to HSE Gateway 1 comments
Building 3 - Proposed Roof Plan	C645_B03_P_RF_001	1:100	E		
Building 4 - Proposed Ground Floor Plan	C645_B04_P_00_001	1:100	E	F	Layout changes in response to HSE Gateway 1 comments
Building 4 - Proposed First Floor Plan	C645_B04_P_01_001	1:100	E	F	Layout changes in response to HSE Gateway 1 comments
Building 4 - Proposed Second Floor Plan	C645_B04_P_02_001	1:100	E	F	Layout changes in response to HSE Gateway 1 comments
Building 4 - Proposed Third Floor Plan	C645_B04_P_03_001	1:100	E	F	Layout changes in response to HSE Gateway 1 comments
Building 4 - Proposed Fourth Floor Plan	C645_B04_P_04_001	1:100	E	F	Layout changes in response to HSE Gateway 1 comments
Building 4 - Proposed Fifth Floor Plan	C645_B04_P_05_001	1:100	E	F	Layout changes in response to HSE Gateway 1 comments
Building 4 - Proposed Sixth Floor Plan	C645_B04_P_06_001	1:100	E	F	Layout changes in response to HSE Gateway 1 comments
Building 4 - Proposed Seventh Floor Plan	C645_B04_P_07_001	1:100	E	F	Layout changes in response to HSE Gateway 1 comments
Building 4 - Proposed Roof Plan	C645_B04_P_RF_001	1:100	E		
Building 5 - Proposed Lower Ground Floor Plan	C645_B05_P_LG_001	1:125	F		
Building 5 - Proposed Ground Floor Plan	C645_B05_P_00_001	1:125	F		
Building 5 - Proposed First Floor Plan	C645_B05_P_01_001	1:125	E		
Building 5 - Proposed Second Floor Plan	C645_B05_P_02_001	1:125	E		
Building 5 - Proposed Roof Plan	C645_B05_P_RF_001	1:125	E		

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Building 6 - Proposed Ground Floor Plan	C645_B06_P_00_001	1:100	E	F	Layout changes in response to HSE Gateway 1 comments
Building 6 - Proposed Typical Floor Plan (First to Third Levels)	C645_B06_P_TY_001	1:100	E	F	Layout changes in response to HSE Gateway 1 comments
Building 6 - Proposed Fourth Floor Plan	C645_B06_P_04_001	1:100	E	F	Layout changes in response to HSE Gateway 1 comments
Building 6 - Proposed Roof Plan	C645_B06_P_RF_001	1:100	E		
Building 7 - Proposed Ground Floor Plan	C645_B07_P_00_001	1:100	E	F	Layout changes in response to HSE Gateway 1 comments
Building 7 - Proposed Typical Floor 1 (Second to Fifth Levels)	C645_B07_P_TY1_001	1:100	E	F	Layout changes in response to HSE Gateway 1 comments
Building 7 - Proposed Typical Floor Plan 2 (First and Sixth Levels)	C645_B07_P_TY2_001	1:100	E	F	Layout changes in response to HSE Gateway 1 comments
Building 7 - Proposed Seventh Floor Plan	C645_B07_P_07_001	1:100	E	F	Layout changes in response to HSE Gateway 1 comments
Building 7 - Proposed Eighth Floor Plan	C645_B07_P_08_001	1:100	E		
Building 7 - Proposed Roof Plan	C645_B07_P_RF_001	1:100	E		
Building 8 - Proposed Ground Floor Plan	C645_B08_P_00_001	1:125	E	F	Layout changes in response to HSE Gateway 1 comments
Building 8 - Proposed Typical Floor 1 (Second to Fifth Levels)	C645_B08_P_TY1_001	1:125	E	F	Layout changes in response to HSE Gateway 1 comments
Building 8 - Proposed First Floor Plan	C645_B08_P_01_001	1:125	A	B	Layout changes in response to HSE Gateway 1 comments
Building 8 - Proposed Sixth Floor Plan	C645_B08_P_06_001	1:125	A	B	Layout changes in response to HSE Gateway 1 comments
Building 8 - Proposed Seventh Floor Plan	C645_B08_P_07_001	1:125	E	F	Layout changes in response to HSE Gateway 1 comments
Building 8 - Proposed Eighth Floor Plan	C645_B08_P_08_001	1:125	E	F	Layout changes in response to HSE Gateway 1 comments
Building 8 - Proposed Roof Plan	C645_B08_P_RF_001	1:125	E		
Building 9 - Proposed Ground Floor Plan	C645_B09_P_00_001	1:100	E	F	Layout changes in response to HSE Gateway 1 comments
Building 9 - Proposed Typical Floor Plan (First to Third Levels)	C645_B09_P_TY_001	1:100	E	F	Layout changes in response to HSE Gateway 1 comments
Building 9 - Proposed Fourth Floor Plan	C645_B09_P_04_001	1:100	E	F	Layout changes in response to HSE Gateway 1 comments
Building 9 - Proposed Roof Plan	C645_B09_P_RF_001	1:100	E		
Building 10 - Proposed Ground Floor Plan	C645_B10_P_00_001	1:100	E	F	Building 10 reduced in height and layout changes in response to HSE Gateway 1 comments
Building 10 - Proposed Typical Floor Plan (First to Fifth Levels)	C645_B10_P_TY_001	1:100	E	F	Building 10 reduced in height and layout changes in response to HSE Gateway 1 comments
Building 10 - Proposed Fifth Floor Plan	C645_B10_P_05_001	1:100		D	Building 10 reduced in height and layout changes in response to HSE Gateway 1 comments
<b>Building 10 - Proposed Sixth Floor Plan</b>	<b>C645_B10_P_06_001</b>	<b>1:100</b>	<b>A</b>	<b>WITHDRAWN</b>	Building 10 reduced in height and layout changes in response to HSE Gateway 1 comments
Building 10 - Proposed Roof Plan	C645_B10_P_RF_001	1:100	E		
Building 11 - Proposed Ground Floor Plan	C645_B11_P_00_001	1:100	E	F	Layout changes in response to HSE Gateway 1 comments
Building 11 - Proposed Typical Floor 1 (Second to Fifth Levels)	C645_B11_P_TY1_001	1:100	E	F	Layout changes in response to HSE Gateway 1 comments
Building 11 - Proposed Typical Floor 2 (First and Sixth Levels)	C645_B11_P_TY2_001	1:100	E	F	Layout changes in response to HSE Gateway 1 comments
Building 11 - Proposed Seventh Floor Plan	C645_B11_P_07_001	1:100	E	F	Layout changes in response to HSE Gateway 1 comments
Building 11 - Proposed Roof Plan	C645_B11_P_RF_001	1:100	E		

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Building 12 - Proposed Ground Floor Plan	C645_B12_P_00_001	1:100	E	F	Layout changes in response to HSE Gateway 1 comments
Building 12 - Proposed Typical Floor Plan (First to Fifth Levels)	C645_B12_P_TY_001	1:100	E	F	Layout changes in response to HSE Gateway 1 comments
Building 12 - Proposed Sixth Floor Plan	C645_B12_P_06_001	1:100	E	F	Layout changes in response to HSE Gateway 1 comments
Building 12 - Proposed Seventh Floor Plan	C645_B12_P_07_001	1:100	E	F	Layout changes in response to HSE Gateway 1 comments
Building 12 - Proposed Roof Floor Plan	C645_B12_P_RF_001	1:100	E		

Wheelchair Accessible Unit Plans (31 No. Drawings)	Drawing Number	Scale at A1	LBRuT 2 Submission Revision	LBRuT 2 Amendments Revision	Comments
<b>Building 2 - Accessible Unit Apartment 2.G.2</b>	<b>C645_B02_P_00_002</b>	<b>1:20</b>	<b>D</b>	<b>WITHDRAWN</b>	<b>Drawing withdrawn as apartment is no longer wheelchair accessible due to changes to ground floor layout</b>
Building 2 - Accessible Unit Apartment 2.G.3	C645_B02_P_00_003	1:25	D	E	Layout changes in response to consultee comments and ground floor changes
Building 2 - Accessible Unit Apartment 2.G.7	C645_B02_P_00_005	1:25	D	E	Layout changes in response to consultee comments and ground floor changes
Building 2 - Accessible Unit Apartment 2.G.8	C645_B02_P_00_006	1:30	D	E	Layout changes in response to consultee comments and ground floor changes
Building 2 - Accessible Unit Apartment 2.G.5	C645_B02_P_00_007	1:25	-	A	Layout changes in response to consultee comments and ground floor changes
Building 2 - Accessible Unit Apartment 2.G.1	C645_B02_P_00_008	1:25		-	New wheelchair accessible unit
Building 2 - Accessible Unit Apartment 2.TY1.3	C645_B02_P_TY1_002	1:20	D	E	Layout changes in response to consultee comments
Building 2 - Accessible Unit Apartment 2.TY1.16	C645_B02_P_TY1_003	1:20	D	E	Layout changes in response to consultee comments
Building 3 - Accessible Unit Apartment 3.G.1	C645_B03_P_00_002	1:30	D	E	Layout changes in response to consultee comments and ground floor changes
Building 3 - Accessible Unit Apartment 3.G.3	C645_B03_P_00_003	1:20	D	E	Layout changes in response to consultee comments and ground floor changes
Building 3 - Accessible Unit Apartment 3.G.2	C645_B03_P_00_005	1:25		-	New wheelchair accessible unit
Building 3 - Accessible Unit Apartment 3.4.4	C645_B03_P_04_002	1:25		-	New wheelchair accessible unit
<b>Building 3 - Accessible Unit Apartment 3.5.4</b>	<b>C645_B03_P_05_002</b>	<b>1:25</b>	<b>D</b>	<b>WITHDRAWN</b>	<b>Drawing withdrawn as apartment is no longer wheelchair accessible due to changes to ground floor layout</b>
Building 3 - Accessible Unit Apartment 3.TY.4	C645_B03_P_TY_002	1:25	D	E	Layout changes in response to consultee comments
Building 4 - Accessible Unit Apartment 4.1.2	C645_B04_P_01_002	1:25	D	E	Layout changes in response to consultee comments
Building 4 - Accessible Unit Apartment 4.1.3	C645_B04_P_01_003	1:25	D	E	Layout changes in response to consultee comments
Building 4 - Accessible Unit Apartment 4.2.2	C645_B04_P_02_002	1:25	D	E	Layout changes in response to consultee comments
Building 4 - Accessible Unit Apartment 4.2.3	C645_B04_P_02_003	1:25	D	E	Layout changes in response to consultee comments
Building 4 - Accessible Unit Apartment 4.5.2	C645_B04_P_05_002	1:25	D	E	Layout changes in response to consultee comments
Building 4 - Accessible Unit Apartment 4.5.3	C645_B04_P_05_003	1:25	D	E	Layout changes in response to consultee comments
Building 6 - Accessible Unit Apartment 6.TY.5	C645_B06_P_TY_002	1:30	D	E	Layout changes in response to consultee comments
Building 7 - Accessible Unit Apartment 7.G.1	C645_B07_P_00_002	1:25	D	E	Layout changes in response to consultee comments and ground floor changes
<b>Building 7 - Accessible Unit Apartment 7.G.2</b>	<b>C645_B07_P_00_003</b>	<b>1:25</b>	<b>D</b>	<b>WITHDRAWN</b>	<b>Drawing withdrawn as apartment is no longer wheelchair accessible due to changes to ground floor layout</b>
Building 7 - Accessible Unit Apartment 7.G.4	C645_B07_P_00_004	1:25	D	E	Layout changes in response to consultee comments and ground floor changes
Building 8 - Accessible Unit Apartment 8.G.5	C645_B08_P_00_002	1:30	D	E	Layout changes in response to consultee comments and ground floor changes
Building 8 - Accessible Unit Apartment 8.G.3	C645_B08_P_00_003	1:25	D	E	Layout changes in response to consultee comments and ground floor changes

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Building 8 - Accessible Unit Apartment 8.TY1.4	C645_B08_P_TY1_002	1:30	D	E	Layout changes in response to consultee comments
Building 8 - Accessible Unit Apartment 8.TY1.5	C645_B08_P_TY1_003	1:25	D	E	Layout changes in response to consultee comments
Building 8 - Accessible Unit Apartment 8.TY1.2	C645_B08_P_TY1_004	1:25	-	A	Layout changes in response to consultee comments
Building 9 - Accessible Unit Apartment 9.TY.1	C645_B09_P_TY_002	1:25	D	E	Layout changes in response to consultee comments
Building 11 - Accessible Unit Apartment 11.G.1	C645_B11_P_00_002	1:20	D	E	Layout changes in response to consultee comments and ground floor changes
Building 11 - Accessible Unit Apartment 11.G.2	C645_B11_P_00_003	1:20	D	E	Layout changes in response to consultee comments and ground floor changes
Building 12 - Accessible Unit Apartment 12.G.1	C645_B12_P_00_002	1:20	D	E	Layout changes in response to consultee comments and ground floor changes
Building 12 - Accessible Unit Apartment 12.G.2	C645_B12_P_00_003	1:20	D	E	Layout changes in response to consultee comments and ground floor changes

**Refuse Store Plans (7 No. Drawings)**

	<b>Drawing Number</b>	<b>Scale at A1</b>	<b>LBRuT 2 Submission Revision</b>	<b>LBRuT 2 Amendments Revision</b>	<b>Comments</b>
Building 2 - Ground Floor Level Refuse Store Plans	C645_B02_P_00_009	1:50		-	New drawing as refuse store moved to ground floor in response to HSE Gateway 1 comments
Building 3 - Ground Floor Level Refuse Store Plan	C645_B03_P_00_004	1:50	D	E	Layout changes in response to HSE Gateway 1 and consultee comments
Building 4 - Ground Floor Level Refuse Store Plan	C645_B04_P_00_002	1:50	D	E	Layout changes in response to HSE Gateway 1 and consultee comments
Building 6 - Ground Floor Level Refuse Store Plan	C645_B06_P_00_002	1:50	D	E	Layout changes in response to HSE Gateway 1 and consultee comments
Building 7 - Ground Floor Level Refuse Store Plans	C645_B07_P_00_005	1:50		-	New drawing as refuse store moved to ground floor in response to HSE Gateway 1 comments
Building 8 - Ground Floor Level Refuse Store Plan	C645_B08_P_00_005	1:50	D	E	Layout changes in response to HSE Gateway 1 and consultee comments
Building 9 - Ground Floor Level Refuse Store Plan	C645_B09_P_00_002	1:50	D	E	Layout changes in response to HSE Gateway 1 and consultee comments
Building 10 - Ground Floor Level Refuse Store Plan	C645_B10_P_00_003	1:50	D	E	Layout changes in response to HSE Gateway 1 and consultee comments
Building 11 - Ground Floor Level Refuse Store Plan	C645_B11_P_00_004	1:50		-	New drawing as refuse store moved to ground floor in response to HSE Gateway 1 comments
Building 12 - Ground Floor Level Refuse Store Plan	C645_B12_P_00_004	1:50	D	E	Layout changes in response to HSE Gateway 1 and consultee comments

**Building Elevations (53 No. Drawings)**

	<b>Drawing Number</b>	<b>Scale at A1</b>	<b>LBRuT 2 Submission Revision</b>	<b>LBRuT 2 Amendments Revision</b>	<b>Comments</b>
Building 1 - Proposed East Elevation	C645_B01_E_E_001	1:100	F	G	Updates to massing and design of Building 1
Building 1 - Proposed North Elevation	C645_B01_E_N_001	1:100	F	G	Updates to massing and design of Building 1
Building 1 - Proposed South Elevation	C645_B01_E_S_001	1:100	F	G	Updates to massing and design of Building 1
Building 1 - Proposed West Elevation	C645_B01_E_W_001	1:100	F	G	Updates to massing and design of Building 1
Building 2 - Proposed East Elevation	C645_B02_E_E_001	1:125	E	F	Updates to elevations to incorporate HSE Gateway 1 comments
Building 2 - Proposed North Elevation 1	C645_B02_E_N_001	1:125	E		
Building 2 - Proposed North Elevation 2	C645_B02_E_N_002	1:125	E	F	Updates to elevations to incorporate HSE Gateway 1 comments
Building 2 - Proposed South Elevation	C645_B02_E_S_001	1:125	E	F	Updates to elevations to incorporate HSE Gateway 1 comments

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Building 2 - Proposed West Elevation 1	C645_B02_E_W_001	1:125	E	F	Updates to elevations to incorporate HSE Gateway 1 comments
Building 2 - Proposed West Elevation 2	C645_B02_E_W_002	1:125	E	F	Updates to elevations to incorporate HSE Gateway 1 comments
Building 3 - Proposed East Elevation	C645_B03_E_E_001	1:100	E	F	Updates to elevations to incorporate HSE Gateway 1 comments
Building 3 - Proposed North Elevation	C645_B03_E_N_001	1:100	E	F	Updates to elevations to incorporate HSE Gateway 1 comments
Building 3 - Proposed South Elevation	C645_B03_E_S_001	1:100	E		
Building 3 - Proposed West Elevation	C645_B03_E_W_001	1:100	E	F	Updates to elevations to incorporate HSE Gateway 1 comments
Building 4 - Proposed East Elevation	C645_B04_E_E_001	1:100	E	F	Updates to elevations to incorporate HSE Gateway 1 comments
Building 4 - Proposed North Elevation	C645_B04_E_N_001	1:100	E		
Building 4 - Proposed South Elevation	C645_B04_E_S_001	1:100	E	F	Updates to elevations to incorporate HSE Gateway 1 comments
Building 4 - Proposed West Elevation	C645_B04_E_W_002	1:100	E		
Building 5 - Proposed Bottleworks Elevations - North, East & West	C645_B05_E_H_001	1:100	F		
Building 5 - Proposed South Elevation	C645_B05_E_S_001	1:100	F		
Building 5 - Proposed East & North Elevations	C645_B05_E_E_001	1:100	F		
Building 5 - Proposed North & West Elevations	C645_B05_E_N_002	1:100	F		
Building 6 - Proposed East Elevation	C645_B06_E_E_001	1:100	E		
Building 6 - Proposed North Elevation	C645_B06_E_N_001	1:100	E	F	Updates to elevations to incorporate HSE Gateway 1 comments
Building 6 - Proposed South Elevation 1	C645_B06_E_S_001	1:100	E	F	Updates to elevations to incorporate HSE Gateway 1 comments
Building 6 - Proposed South Elevation 2	C645_B06_E_S_002	1:100	E		
Building 6 - Proposed West Elevation	C645_B06_E_W_001	1:100	E		
Building 7 - Proposed East Elevation	C645_B07_E_E_001	1:100	E	F	Updates to elevations to incorporate HSE Gateway 1 comments
Building 7 - Proposed North Elevation	C645_B07_E_N_001	1:100	E		
Building 7 - Proposed South Elevation	C645_B07_E_S_001	1:100	E		
Building 7 - Proposed West Elevation	C645_B07_E_W_001	1:100	E	F	Updates to elevations to incorporate HSE Gateway 1 comments
Building 8 - Proposed East Elevation	C645_B08_E_E_001	1:125	E	F	Updates to elevations to incorporate HSE Gateway 1 comments
Building 8 - Proposed North Elevation	C645_B08_E_N_001	1:125	E		
Building 8 - Proposed South Elevation	C645_B08_E_S_001	1:125	E	F	Updates to elevations to incorporate HSE Gateway 1 comments
Building 8 - Proposed West Elevation 1	C645_B08_E_W_001	1:125	E	F	Updates to elevations to incorporate HSE Gateway 1 comments
Building 8 - Proposed West Elevation 2	C645_B08_E_W_002	1:125	E		
Building 9 - Proposed East Elevation	C645_B09_E_E_001	1:100	E		
Building 9 - Proposed North Elevation	C645_B09_E_N_001	1:100	E		
Building 9 - Proposed South Elevation	C645_B09_E_S_001	1:100	E		
Building 9 - Proposed West Elevation	C645_B9_E_W_001	1:100	E		

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Building 10 - Proposed East Elevation	C645_B10_E_E_001	1:100	E	F	Building 10 reduced in height
Building 10 - Proposed North Elevation	C645_B10_E_N_001	1:100	E	F	Building 10 reduced in height
Building 10 - Proposed South Elevation	C645_B10_E_S_001	1:100	E	F	Building 10 reduced in height
Building 10 - Proposed West Elevation	C645_B10_E_W_001	1:100	E	F	Building 10 reduced in height
Building 11 - Proposed East Elevation	C645_B11_E_E_001	1:100	E	F	Updates to elevations to incorporate HSE Gateway 1 comments
Building 11 - Proposed North Elevation	C645_B11_E_N_001	1:100	E		
Building 11 - Proposed South Elevation	C645_B11_E_S_001	1:100	E		
Building 11 - Proposed West Elevation	C645_B11_E_W_001	1:100	E	F	Updates to elevations to incorporate HSE Gateway 1 comments
Building 12 - Proposed East Elevation	C645_B12_E_E_001	1:100	E	F	Updates to elevations to incorporate HSE Gateway 1 comments
Building 12 - Proposed North Elevation 1	C645_B12_E_N_001	1:100	E		
Building 12 - Proposed North Elevation 2	C645_B12_E_N_002	1:100	E	F	Updates to elevations to incorporate HSE Gateway 1 comments
Building 12 - Proposed South Elevation	C645_B12_E_S_002	1:100	E		
Building 12 - Proposed West Elevation	C645_B12_E_W_001	1:100	E		

<b>Bay Study Elevations (8 No. Drawings)</b>	<b>Drawing Number</b>	<b>Scale at A1</b>	<b>LBRuT 2 Submission Revision</b>	<b>LBRuT 2 Amendments Revision</b>	<b>Comments</b>
Mansion Typology Bay Study Elevation - Double Gable	C645_Z1_E_01_001	1:50	D		
Mansion Typology Bay Study Elevation - Single Bay	C645_Z1_E_01_002	1:50	D		
Mansion Typology Bay Study Elevation - Single Gable	C645_Z1_E_01_003	1:50	D	E	Updates to elevations to incorporate HSE Gateway 1 comments
Warehouse Typology Bay Study Elevation	C645_Z1_E_01_009	1:50	D		
Bottling and Hotel Building Bay Study Elevation - Existing Façade Office	C645_Z1_E_01_005	1:50	D		
Bottling and Hotel Building Bay Study Elevation - New Façade Office	C645_Z1_E_01_006	1:50	D		
Bottling and Hotel Building Bay Study Elevation - Existing Façade Hotel	C645_Z1_E_01_007	1:50	D		
Cinema Bay Study Elevation	C645_Z1_E_01_008	1:50	E	F	Updates to massing and design of cinema

<b>Site Sections and Elevations (24 No. Drawings)</b>	<b>Drawing Number</b>	<b>Scale at A1</b>	<b>LBRuT 2 Submission Revision</b>	<b>LBRuT 2 Amendments Revision</b>	<b>Comments</b>
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Proposed Site Elevation AA	C645_Z1_E_AA_001	1:500	E
Proposed Site Elevation BB	C645_Z1_E_BB_001	1:500	E
Proposed Site Elevation CC	C645_Z1_E_CC_001	1:500	D
Proposed Site Elevation DD	C645_Z1_E_DD_001	1:500	D
Proposed Site Elevation EE	C645_Z1_E_EE_001	1:500	D
Proposed Site Elevation FF	C645_Z1_E_FF_001	1:500	E
Proposed Site Elevation GG	C645_Z1_E_GG_001	1:500	D
Proposed Site Elevation HH	C645_Z1_E_HH_001	1:500	E
Proposed Site Elevation II	C645_Z1_E_II_001	1:500	E
Proposed Site Elevation JJ	C645_Z2_E_JJ_001	1:500	D
Proposed Site Elevation KK	C645_Z2_E_KK_001	1:500	D
Proposed Site Elevation LL	C645_Z2_E_LL_001	1:500	D
Proposed Site Elevation MM	C645_Z2_E_MM_001	1:500	D
Proposed Site Elevation NN	C645_Z2_E_NN_001	1:500	D
Proposed Site Elevation OO	C645_Z2_E_OO_001	1:500	D
Proposed Site Elevation PP	C645_Z2_E_PP_001	1:500	D
Proposed Site Elevation QQ	C645_Z2_E_QQ_001	1:500	D
Proposed Site Elevation RR	C645_Z2_E_RR_001	1:500	E
Proposed Site Section AA	C645_Z1_S_AA_001	1:500	E
Proposed Site Section BB	C645_Z1_S_BB_001	1:500	D
Proposed Site Section CC	C645_Z1_S_CC_001	1:500	D
Proposed Site Section DD	C645_Z2_S_DD_001	1:500	D
Proposed Site Section EE	C645_Z2_S_EE_001	1:500	E
Proposed Site Section FF	C645_Z2_S_FF_001	1:500	D

<b>Parameter Plans (13 No. Drawings)</b>	<b>Drawing Number</b>	<b>Scale at A1</b>	<b>LBRuT 2 Submission Revision</b>	<b>LBRuT 2 Amendments Revision</b>	<b>Comments</b>
Block Footprint and Horizontal Lines of Deviation One to Three Storeys	C645_Z2_P_PR_001	1:1000	E		
Block Footprint and Horizontal Lines of Deviation Four Storeys	C645_Z2_P_PR_002	1:1000	E		
Block Footprint and Horizontal Lines of Deviation Five Storeys	C645_Z2_P_PR_003	1:1000	E		
Block Footprint and Horizontal Lines of Deviation Six Storeys	C645_Z2_P_PR_004	1:1000	E		
Block Footprint and Horizontal Lines of Deviation Seven Storeys	C645_Z2_P_PR_005	1:1000	E		
Proposed Block Heights and Vertical Lines of Deviation	C645_Z2_P_PR_006	1:1000	E		
Proposed Building Levels - Ground Floor	C645_Z2_P_PR_007	1:1000	E		
Proposed Land Use Distribution Ground and Upper Floors	C645_Z2_P_PR_008	1:1000	E		
Proposed Land Use Distribution Basement	C645_Z2_P_PR_009	1:1000	F		



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Proposed Basement Maximum Depth and Extent	C645_Z2_P_PR_010	1:1000	E
Demolition and Retention Plan	C645_Z2_P_PR_011	1:1000	E
Proposed Active Frontages - Ground Floor	C645_Z2_P_PR_012	1:1000	E
Block Footprint and Horizontal Lines of Deviation Eight Storeys	C645_Z2_P_PR_013	1:1000	E

**Obscured Glazing (9 No. Drawings)**

	<b>Drawing Number</b>	<b>Scale</b>	<b>LBRuT 2 Submission Revision</b>	<b>LBRuT 2 Amendments Revision</b>	<b>Comments</b>
Proposed Masterplan Ground Floor Level - Obscured Glazing	18125-SQP-ZZ-SK-018	1:500	A		
Proposed Masterplan First Floor Level - Obscured Glazing	18125-SQP-ZZ-SK-020	1:500	A		
Proposed Masterplan Second Floor Level - Obscured Glazing	18125-SQP-ZZ-SK-022	1:500	A		
Proposed Masterplan Third Floor Level - Obscured Glazing	18125-SQP-ZZ-SK-024	1:500	A		
Proposed Masterplan Fourth Floor Level - Obscured Glazing	18125-SQP-ZZ-SK-026	1:500	A		
Proposed Masterplan Fifth Floor Level - Obscured Glazing	18125-SQP-ZZ-SK-028	1:500	A	B	Amendments required as Building 10 reduced in height
Proposed Masterplan Sixth Floor Level - Obscured Glazing	18125-SQP-ZZ-SK-030	1:500	A	B	Amendments required as Building 10 reduced in height
Proposed Masterplan Seventh Floor Level - Obscured Glazing	18125-SQP-ZZ-SK-032	1:500	A		
Proposed Masterplan Eighth Floor Level - Obscured Glazing	18125-SQP-ZZ-SK-034	1:500	A		

**Conditions Plot Plan (2 No. Drawings)**

	<b>Drawing Number</b>	<b>Scale</b>	<b>LBRuT 2 Submission Revision</b>	<b>LBRuT 2 Amendments Revision</b>	<b>Comments</b>
Conditions Plot Plan	C645_MP_P_00_005	1:1250	A		
Conditions Plot Plan (Basement Works Only)	C645_MP_P_00_006	1:1250	A		

**Application and Ownership Boundaries Revised Drawings (8 No. Drawings)**

	<b>Drawing Number</b>	<b>Scale</b>	<b>LBRuT 2 Submission Revision</b>	<b>LBRuT 2 Amendments Revision</b>	<b>Comments</b>
Red Line Site Location Plan - Applications A and B	JA12_Z0_P_00_003	1:1250@ A0	-		
Red Line Site Location and Applicant Ownership Plan - Application A and B	JA12_Z0_P_00_004	1:1250@ A0	-		
Site Application Boundaries: Application A and B	C645_Z0_P_00_001	1:1250@ A0	B		
Application A Block Plan	C645_Z0_P_00_002	1:500@ A0	A		
Application B Block Plan	C645_Z0_P_00_003	1:500@ A0	A		
Application A - Red Line Site Location Plan	JA12_Z0_P_00_005	1:1250@ A0	-		

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Application B - Red Line Site Location Plan	JA12_Z0_P_00_006	1:1250@ A0	-
Development Area 1 and Development Area 2 Boundaries	JA12_Z0_P_00_008	1:1250@ A0	-

<b>School Application (8 No. Drawings)</b>	<b>Drawing Number</b>	<b>Scale</b>	<b>LBRuT 2 Submission Revision</b>	<b>LBRuT 2 Amendments Revision</b>	<b>Comments</b>
Proposed Bay Study Elevation	C645_Z3_E_01_001	-	A		
Proposed Elevations	C645_Z3_E_AL_001	1:200	B		
Proposed Ground Floor Plan	C645_Z3_P_00_001	1:200	B		
Proposed First Floor Plan	C645_Z3_P_01_001	1:200	A		
Proposed Second Floor Plan	C645_Z3_P_02_001	1:200	A		
Proposed Site Plan	C645_Z3_P_AL_001	1:500	C		
Proposed Roof Plan	C645_Z3_P_RF_001	1:200	B		
Proposed Sections	C645_Z3_S_AA_001	1:200	A		

<b>Existing Site (24 No. Drawings)</b>	<b>Drawing Number</b>	<b>Scale at A1</b>	<b>LBRuT 2 Submission Revision</b>	<b>LBRuT 2 Amendments Revision</b>	<b>Comments</b>
Existing Site Plan	JA12_Z0_P_00_001	1:1250@ A0	-		
Existing Site Survey	JA12_Z0_P_00_009	1:1250@ A0	-		
Existing Site Elevation AA	JA12_Z1_E_AA_001	1:500	-		
Existing Site Elevation FF	JA12_Z1_E_FF_001	1:500	-		
Existing Site Elevation NN	JA12_Z2_E_NN_001	1:500	-		
Former Maltings Building - Existing East Elevation	JA12_B4_E_E_001	1:100	-		
Former Maltings Building - Existing East Elevation Demolition	JA12_B4_E_E_002	1:100	A		
Former Maltings Building - Existing North Elevation	JA12_B4_E_N_001	1:100	-		
Former Maltings Building - Existing North Elevation Demolition	JA12_B4_E_N_002	1:100	A		
Former Maltings Building - Existing South Elevation	JA12_B4_E_S_001	1:100	-		
Former Maltings Building - Existing South Elevation Demolition	JA12_B4_E_S_002	1:100	B		
Former Maltings Building - Existing West Elevation	JA12_B4_E_W_001	1:100	-		
Former Maltings Building - Existing West Elevation Demolition	JA12_B4_E_W_002	1:100	A		
Former Bottling and Hotel Buildings - Existing South Elevation	JA12_B5_E_S_001	1:100	A		
Former Bottling and Hotel Buildings - Existing South Elevation Demolition	JA12_B5_E_S_002	1:100	A		

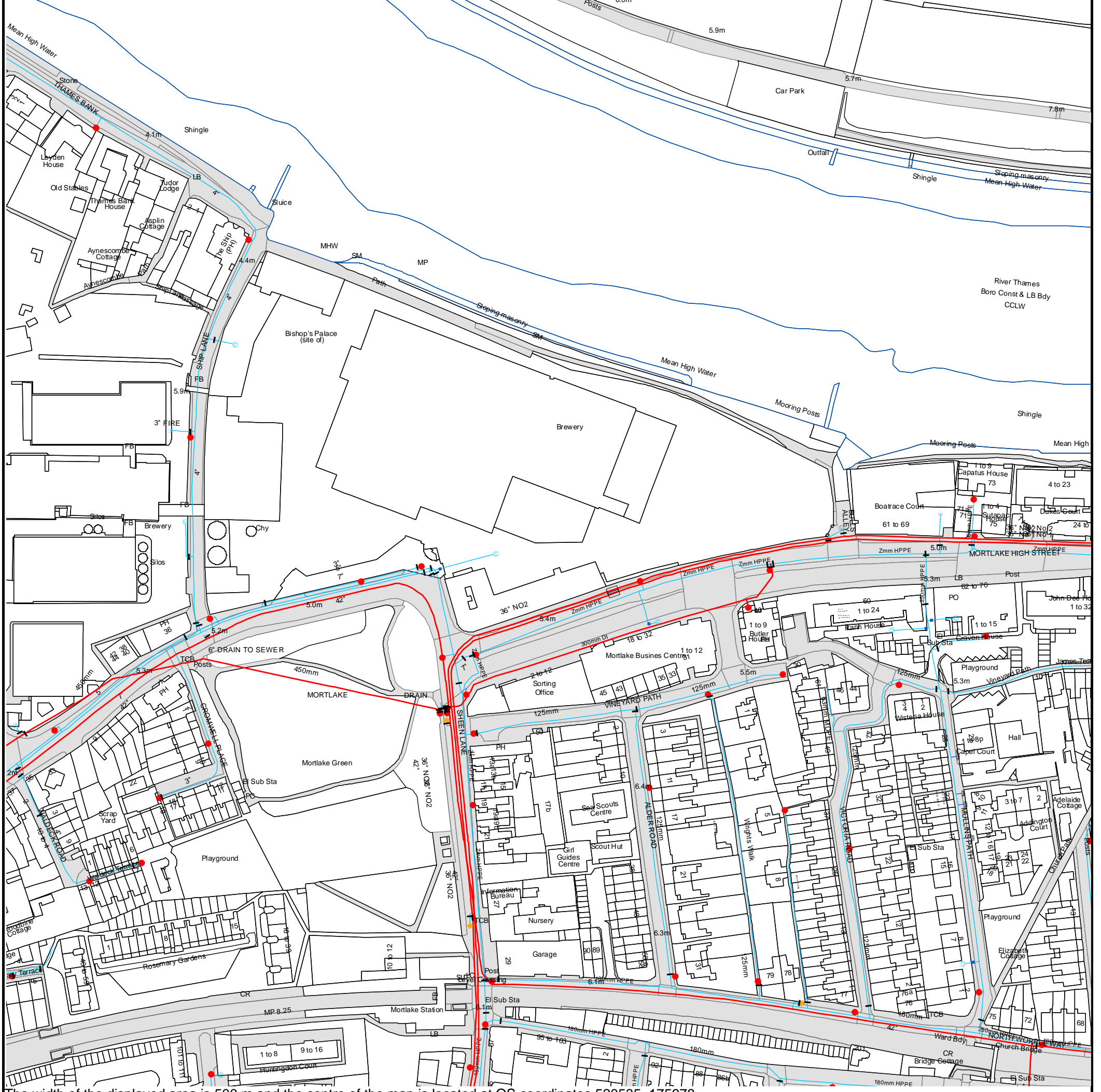
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Former Bottling and Hotel Buildings - Existing West Elevation	JA12_B5_E_W_001	1:100	A
Former Bottling and Hotel Buildings - Existing West Elevation Demolition	JA12_B5_E_W_002	1:100	-
Former Bottling and Hotel Buildings - Existing North & East Elevation 1	JA12_B5_E_ZZ_001	1:100	-
Former Bottling and Hotel Buildings - Existing North & East Elevation 2	JA12_B5_E_ZZ_002	1:100	-
Former Bottling and Hotel Buildings - Existing North & East Elevation 1 Demolition	JA12_B5_E_ZZ_003	1:100	-
Former Bottling and Hotel Buildings - Existing North & East Elevation 2 Demolition	JA12_B5_E_ZZ_004	1:100	A
Demolition plan - Entire Site	JA12_Z0_P_00_002	1:1250	-
Demolition plan - Development Area 1	JA12_Z1_P_00_001	1:500	B
Demolition plan - Development Area 2	JA12_Z2_P_00_001	1:500	-



## **Appendix B – Existing Hydrant Locations**

**Asset Location Search Water Map - ALS/ALS Standard/2017 3494020**



The width of the displayed area is 500 m and the centre of the map is located at OS coordinates 520535, 175978.  
 The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified and established on site before any works are undertaken.

Based on the Ordnance Survey Map with the Sanction of the controller of H.M. Stationery Office, License no. 100019345 Crown Copyright Reserved.



# ALS Water Map Key

## Water Pipes (Operated & Maintained by Thames Water)

- 4"** **Distribution Main:** The most common pipe shown on water maps. With few exceptions, domestic connections are only made to distribution mains.
- 16"** **Trunk Main:** A main carrying water from a source of supply to a treatment plant or reservoir, or from one treatment plant or reservoir to another. Also a main transferring water in bulk to smaller water mains used for supplying individual customers.
- 3" SUPPLY** **Supply Main:** A supply main indicates that the water main is used as a supply for a single property or group of properties.
- 3" FIRE** **Fire Main:** Where a pipe is used as a fire supply, the word FIRE will be displayed along the pipe.
- 3" METERED** **Metered Pipe:** A metered main indicates that the pipe in question supplies water for a single property or group of properties and that quantity of water passing through the pipe is metered even though there may be no meter symbol shown.
- Transmission Tunnel:** A very large diameter water pipe. Most tunnels are buried very deep underground. These pipes are not expected to affect the structural integrity of buildings shown on the map provided.
- Proposed Main:** A main that is still in the planning stages or in the process of being laid. More details of the proposed main and its reference number are generally included near the main.

PIPE DIAMETER	DEPTH BELOW GROUND
Up to 300mm (12")	900mm (3')
300mm - 600mm (12" - 24")	1100mm (3' 8")
600mm and bigger (24" plus)	1200mm (4')

## Valves

- General Purpose Valve
- Air Valve
- Pressure Control Valve
- Customer Valve

## Hydrants

- Single Hydrant

## Meters

- Meter

## End Items

Symbol indicating what happens at the end of a water main.

- Blank Flange
- Capped End
- Emptying Pit
- Undefined End
- Manifold
- Customer Supply
- Fire Supply

## Operational Sites

- Booster Station
- Other
- Other (Proposed)
- Pumping Station
- Service Reservoir
- Shaft Inspection
- Treatment Works
- Unknown
- Water Tower

## Other Symbols

- Data Logger

## Other Water Pipes (Not Operated or Maintained by Thames Water)

- Other Water Company Main:** Occasionally other water company water pipes may overlap the border of our clean water coverage area. These mains are denoted in purple and in most cases have the owner of the pipe displayed along them.
- Private Main:** Indicates that the water main in question is not owned by Thames Water. These mains normally have text associated with them indicating the diameter and owner of the pipe.

## **12. Response to Consultee Comments on Noise**

Prepared by Waterman IE

Dated 29th July 2022

(pages 295 – 301)

# Former Stag Brewery, Mortlake, Hybrid Planning Application (22/0900/OUT) & Detailed Application School (22/0902/FUL)

## Briefing Note – Response to Consultee Comments on Noise




**Date:** 29 July 2022

**Client Name:** Reselton Properties Limited

**Document Reference:** WIE18671-114-BN-2.1.2-Noise Conditions

This document has been prepared and checked in accordance with Waterman Group's IMS (BS EN ISO 9001: 2015, BS EN ISO 14001: 2015 and BS EN ISO 45001:2018)

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Issue	Prepared by	Checked & Approved by
001	Innes Urbanski Associate Director 	Mark Maclagan Technical Director 
002	Ellen Smith Principal Consultant	Innes Urbanski Associate Director 

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## 1. Introduction

1.1. Comments have been received from statutory consultees and internal consultees at the London Borough of Richmond upon Thames (LBRuT) on the Hybrid Planning Application (planning ref. 22/0900/OUT) and the Detailed Planning Application for the School (planning ref. 22/0902/FUL) at the former Stag Brewery site. This Briefing Note provides a response to those comments received pertaining to noise; namely:

- 22/0900/OUT 10. Environmental Health (Noise)
- 22/0902/FUL 9. Environmental Health (Noise)
- 22/0902/FUL 3. Sport England

1.2. We would welcome the opportunity to comment on the draft conditions that are proposed to be attached to any permission.

### 22/0900/OUT Internal Consultees - 10. Environmental Health

1.3. The Environmental Health Department of LBRuT have recommended a number of areas to which noise conditions should be applied, each is addressed in turn.



### LBRuT Suggested Condition: Noise impact from demolition and construction activity upon residents in the vicinity of the development

- 1.4. A condition to reduce the potential impact from demolition and construction works is considered reasonable. It is anticipated that this would require a construction environmental management plan (CEMP) to be submitted in writing to the local planning authority (LPA) for approval. This would be required in advance of any works and would likely need to identify specific requirements listed by the LPA such as operational hours, mitigation measures, site contact details and complaints procedure for residents.

### LBRuT Suggested Condition: Noise impact from external transportation noise sources such as rail, aircraft and road traffic on the proposed residential development (noise protection residential / Noise Protection from internal transmission)

- 1.5. A noise condition to demonstrate habitable rooms comply with the noise criteria of BS8233<sup>1</sup> (or comparable guideline values) prior to occupation or above ground works, is reasonable.
- 1.6. Noise protection from internal transmission would be dealt with under Approved Document E of the Building Regulations<sup>2</sup>, which specifies minimum acoustic performance for internal separating walls and floors.

### LBRuT Suggested Condition: Noise from mechanical services plant including heating, ventilation and air conditioning (HVAC) and kitchen extraction serving the proposed development affecting existing residential properties in the vicinity of the proposed development

- 1.7. A noise condition specific to HVAC and kitchen extraction is reasonable, and it is anticipated that this would be set relative to representative background sound levels (dB L<sub>A90</sub>). It is understood that LBRuT's general requirement is for the Rating Level (as defined in BS4142<sup>3</sup>) to be 10dB below the Background Sound Level (dB L<sub>A90</sub>). Further to this we would recommend a minimum noise limit of 35dB L<sub>A,r,Tr</sub> during the night-time period where night-time background sound levels are low, which based on the baseline environmental noise survey is applicable to the majority of the surrounding area. This would safeguard residents for restorative sleep based on WHO guidance.
- 1.8. **LBRuT Response:** *"I concur with the additional setting of a minimum setting of a minimum background noise limit for the night time period."*

### LBRuT Suggested Condition: Potential noise breakout from inadvertently leaving emergency doors open namely for the proposed cinema

- 1.9. A noise condition specific to the emergency doors of the proposed cinema during normal operations, excluding emergency evacuations, is reasonable and a proactive approach.

<sup>1</sup> BSI (2014), BS8233:2014: *Sound insulation and noise reduction for buildings*. BSI.

<sup>2</sup> HM Government. (2015) Building Regulations 2010 – Approved Document E Resistance to the passage of sound. Crown Copyright.

<sup>3</sup> BSI. (2019) BS4142:2014+A1:2019 *Methods for rating and assessing industrial and commercial sound*. BSI.

## 22/0902/FUL Internal Consultees- 9 Environmental Health

- 1.10. Environmental Health have recommended a number of areas to which noise conditions should be applied, each is addressed in turn.

### LBRuT Suggested Condition: Noise impact from demolition and construction activity upon residents in the vicinity of the development

- 1.11. Similar to the masterplan application, a condition to reduce the potential impact from demolition and construction works is considered reasonable. As stated in paragraph 1.3, it is anticipated that this would require a CEMP to be submitted in writing to the local planning authority (LPA) for approval. This would be required in advance of any works and would likely need to identify specific requirements listed by the LPA such as operational hours, mitigation measures, site contact details and complaints procedure for residents.

### LBRuT Suggested Condition: The internal noise of the proposed school requires protection

- 1.12. A noise condition requiring compliance with BB93<sup>4</sup> acoustic design standards, namely not to exceed the upper limit for indoor ambient noise levels, is reasonable.

### LBRuT Suggested Condition: Noise generated from the sports playing facilities and multi games use area (MUGA) Noise Control.

- 1.13. A noise condition requiring details of noise control measures for both the sports pitch and MUGA, such as operational hours and details on the fencing is considered reasonable. Compliance with a specific 'noise limit' would be difficult to demonstrate through measurement alone, due to the contribution from transport sources to the overall prevailing noise climate. This would need to be demonstrated through prediction, which is already presented in the ES, based on the noise source criteria specified by Sport England.
- 1.14. **LBRuT response:** *"I accept the limitation and note the duplication with predictions already presented within the ES. To provide an adequate protection the noise control measures need to be adequately identified and secured. I therefore recommend this element be subject to condition requiring the submission of a Noise Management Plan (NMP) to be approved by the Local Planning Authority before first commencement of use. Further, in respect of para 1.20 'With regard to operational hours the ES states, "In terms of operational solutions, the hours of play could also be restricted to up to 9pm Monday to Saturday and 8pm on Sundays and Bank Holidays (as per the proposed Community Use Agreement), reducing the impact during the evening period."' On the basis of the predictions presented at Table 1. Assessment of Noise Effects Associated with Sports Pitch and MUGA the restricted hours are considered acceptable and should be secured by condition and incorporated within the NMP."*
- 1.15. **Waterman further response:** Submission of a Noise Management Plan as a planning condition would be reasonable.

### LBRuT Suggested Condition: Details of the acoustic fencing for the sports pitch

- 1.16. The application includes an inherent weld mesh, twin bar super rebound with EPDM rubber inserts and fixing to reduce noise from balls hitting the fence. This is not an 'acoustic fence' or noise

<sup>4</sup> DoE, EFA (2015) *Acoustic design of schools: performance standards*. Building Bulletin 93. Crown Copyright.

barrier in that it does not screen the noise. The ES assessment predicted a slight increase in noise levels at existing receptors on Watney Road and Williams Lane but not on Lower Richmond Road. Noise from the sports pitch was predicted to be below the WHO benchmark of 55dB L<sub>Aeq,T</sub> and on this basis no further mitigation was proposed, with the exception of maintenance of the fence and operational hours. Further to this, the ES states that noise from the sports pitch is “*not expected to be any higher than the existing intermittent noise levels of play on the two existing sports pitches which currently do not have any fencing or noise mitigation in place.*”

- 1.17. A condition requiring provision of details of the fencing of the sports pitch is considered reasonable.
- 1.18. **LBRuT Comment:** “*A condition, as suggested in para 1.14, would be acceptable. Sport England commented that an acoustic grade timber fence or barrier will be incorporated if this is required from a subsequent detailed assessment. Is this still proposed (it was included in the original application?)*”
- 1.19. **Waterman further response:** An acoustic fence is not proposed for the March 2022 Application as the noise assessment is based on Sport England noise source levels, namely a measured noise emission level of 58 dB L<sub>Aeq (1 hour)</sub> at a distance of 10 m from an AGP, detailed within the Sport England document ‘*Artificial Grass Pitch (AGP) Acoustics – Planning Implications New Guidance for 2015*’. The original assessment was based on higher source noise levels, based on measurements undertaken by Waterman during a football match on a grass pitch with noise measurements conducted at the centre line and behind the goal.

**LBRuT Suggested Condition: Noise from mechanical services plant including heating, ventilation and air conditioning (HVAC) and kitchen extraction serving the proposed development affecting existing residential properties in the vicinity of the proposed development**

- 1.20. Similar to the masterplan application, a condition specific to HVAC and kitchen extraction plant is considered reasonable. As stated in paragraph 1.6, it is anticipated that this would require compliance with a noise limit set relative to the representative background sound levels (dB L<sub>A90</sub>). As previously stated, it is understood that LBRuT’s general requirement is for the Rating Level (as defined in BS4142) to be 10dB below the Background Sound Level (dB L<sub>A90</sub>). Further to this, we would recommend a minimum noise limit of 35dB L<sub>Ar,Tr</sub> during the night-time period where night-time background sound levels are low. This would safeguard residents for restorative sleep based on WHO guidance.
- 1.21. **LBRuT Comment:** “*As above (i.e. see response to para 1.7).*”

### **22/0902/FUL Statutory Consultee- 3 Sport England**

- 1.22. Sport England have no objections subject to their proposals / S106 / inclusion of planning conditions. Clarification needs to be sought on what Sport England’s proposals are.

**Sport England Suggested Condition: Acoustic mitigation: A plan is required showing the location of an additional acoustic barrier and confirmation from the**

Council’s Environmental Health Officer that the artificial pitch can be used up to 9pm.

- 1.23. Clarification needs to be sought on what is meant by the ‘additional acoustic barrier’. The ES assessment predicted that noise from the ‘sports pitch’ and MUGA are *“not expected to be any higher than the existing intermittent noise levels of play on the two existing sports pitch which currently do not have any fencing or noise mitigation in place.”*
- 1.24. For complete transparency, Table 9.21 from the ES is reproduced below which presents the predicted noise from sports use alone together with the predicted change in the environmental noise levels during use of the sports pitches, when account is taken of the prevailing noise levels.

Table 1.1: Assessment of Noise Effects Associated with Sports Pitch and MUGA

SR (Figure 9.1)	Existing Ambient Noise Level (dB(A))	Predicted Noise Level from Sports Pitches (sports pitch & MUGA) (dB (A))	Combined Ambient and Predicted sports pitch & MUGA Noise Level (dB (A))	Change in Noise Level (dB (A))	Level of Effect
SR A – Watney Road	58 day (CRTN 2)	54	59	1	Minor Adverse
	55 evening (LT4)	54	58	3	Minor Adverse
SR B – Williams Lane	58 day (CRTN 2)	53	59	1	Minor Adverse
	55 evening (LT4)	53	57	2	Minor Adverse
SR C – Lower Richmond Road	71 day (LT1)	53	71	0	Negligible
	71 evening (LT1)	53	71	0	Negligible
Closest Future SR (Block 18)	n/a	55	n/a	n/a	Note 2

Note: <sup>1</sup>Daytime period 07:00-19:00; evening period 19:00-23:00, although this does not necessarily reflect operational (usage) times of sports pitch and MUGA. <sup>2</sup> Above Sport England recommended noise level of 50dB LAeq,T but does not exceed WHO benchmark criteria of 55dB LAeq,T for residential amenity.

- 1.25. The inherent mitigation includes weld mesh, twin bar super rebound with EPDM rubber inserts and fixing. Further to this maintenance of the fence and control of operational hours was also proposed to mitigate the potential effects. The ES states *“Other mitigation measures will however be considered to reduce mitigation further, should this be considered necessary.”*
- 1.26. With regard to operational hours the ES states, *“In terms of operational solutions, the hours of play could also be restricted to up to 9pm Monday to Saturday and 8pm on Sundays and Bank Holidays (as per the proposed Community Use Agreement), reducing the impact during the evening period.”*

- 1.27. On this basis it is assumed that LBRuT would be supportive of usage up to 9pm as requested by Sport England.

**Sport England Suggested Condition: Measures to ensure that any properties built near to the artificial pitch will not have balconies and have appropriate ventilation so that windows can be closed as needed when the pitch is in use. Sport England would like to review this text.**

- 1.28. A noise condition, which forms part of the hybrid application, to ensure habitable rooms comply with the noise criteria of BS8233 (or comparable guideline values) prior to occupation would satisfy Sport England's requirement. This would take account of prevailing noise levels and that arising from usage of the sports pitches. The glazing and ventilation selected would allow BS8233 criteria to be achieved for other than purge ventilation and comfort cooling.
- 1.29. The predicted noise level at the nearest future residents which face the sports pitch is not considered excessively high so as to prohibit balconies.
- 1.30. It is considered reasonable for Sport England to review text of the noise condition pertaining to this before it is finalised.

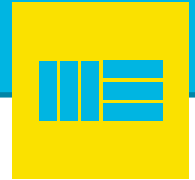
### **13. Townscape Response Tracker**

Prepared by Montagu Evans

Dated 9th August 2022

(pages 302 – 307)

# BRIEFING NOTE



## PREPARED BY

Dr Chris Miele and Alexandra Rowley

## SITE

Stag Brewery, Mortlake

## PURPOSE

Response to consultation comments made by LBRUT & GLA

## DATE

9<sup>th</sup> August 2022

1. Montagu Evans has been instructed by Dartmouth Capital to provide heritage and townscape advice pertaining to the submitted proposals at the Former Stag Brewery, Mortlake. As part of our scope, we have prepared this note to offer observations on the comments made in a consultation response by the London Borough of Richmond upon Thames ('LBRUT') (dated 27 May 2022) and the GLA Stage 1 Report (dated 20 June 2022, ref: GLA/2022/0288/S1/01) regarding the effect of the proposals on heritage assets.
2. The comments are made in regard to proposals submitted for the redevelopment of the former Stag Brewery site at Lower Richmond Road, Mortlake, SW14 7ET ('the Site'). Two linked applications for planning permission for the comprehensive redevelopment of the Site were submitted on the 11th March 2022, and are undergoing consultation at time of writing (LPA Refs: 22/0900/OUT and 22/0902/FUL).

## LONDON BOROUGH OF RICHMOND UPON THAMES (LBRUT)

3. This response addresses four specific comments made by the LBRuT with regard to heritage harm.
4. For completeness we cite the four topics below.
  - A. **SETTING OF THE MALTINGS AND THE CHARACTER AND SIGNIFICANCE OF THIS PART OF MORTLAKE CA33 AS THE SKYLINE WILL CHANGE AND THE NEW BUILDINGS WILL APPEAR MORE DOMINANT BEHIND THE BTM**
5. In terms of the setting effect referred to in this comment, we believe this applies to the view of the development behind the Maltings in views from the opposite bank and Chiswick Bridge, oriented north-west.
6. This comment and our response should be considered in relation to TVIA views 4, 5, 6 and 7, which show the change to the setting of the Maltings, and to the character and appearance of the CA form points along the river. For ease, we have included these at **Appendix 1.0**.
7. The blocks at issue are blocks 2 and 7 (8 storeys with a 9 storey turret) and 8 (9 storeys on the river side).
8. We start by making a few preliminary points; first, for clarification, change to skyline in itself does not lead to harm; and with regard to this particular site, there is an allocation<sup>1</sup> for its redevelopment which requires a change to the skyline. Through the allocation, the Development Plan anticipates a significant change which also necessarily affects the setting of the Maltings and of the Conservation Area. While SA 24 and its supporting text do not address building heights specifically, the equivalent blocks in the Stag Brewery Planning Brief (2011) are at 4-5 storeys.

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<sup>1</sup> LBRuT Local Plan SA24

## Character of the Maltings building

9. The Maltings building has a robust character derived from its industrial purpose, with a distinctive appearance and bulk. As such its skyline profile is not, in our view, an integral part of its architectural interest. The building is particularly prominent in View 4, because one sees two sides of it, and from this position, the viewer would clearly perceive the gap to the upstream side and appreciate very clearly its eastern edge on that side. The open space has a separating distance of 52.7 to Block 7, and the depth of this space is understood in the view.
10. In views 6 and 7, the public square is particularly effective at exposing the side elevation and creates a visual interval, on a different alignment, so that the building retains its prominence in this view where its skyline is more distinctive.
11. The viewer would appreciate it therefore as a distinctive, three dimensional object which forms a very strong feature by the river, with a palette which contrasts with the rest of the development, and enhances its distinctive character. The perceived monumental form is accentuated by the abrupt change in scale from the two storey Ship Public House to the circa six storey face of the Maltings adjacent. The relative scale difference between the public house and adjacent houses emphasises the monumentality, which gives it an added presence.
12. Whilst there are some features that are apparent above the ridgeline, they are set at a different angle (broadly 90 degrees) and the longer, larger roof of Block 2 to the rear of the site, is set 67-80m behind that. The viewer's perception in three dimensions would ensure that the appreciation of the building would not, in practice, be undermined.
13. We don't agree that the Maltings will be dominated by the surrounding development; rather we think it will be clearly legible as a distinctive piece of industrial architecture, which by reason of its character will be differentiated from surrounding development.
14. If there is harm, it is quite limited, and the local setting of the Maltings is materially improved, and its given a beneficial use.
15. In view 5 the Maltings will retain its identity and prominence because the skyline change is set well back from the frontage, and perceived in the context of the well-proportioned public space.
16. If, however, a different view is formed, it is relevant that the building is not statutorily listed. It is in the Conservation Area, and is therefore subject to Section 72 of the 1990 Act.

## **B) THE HEIGHT OF THE PROPOSED BLOCKS, WILL RESULT IN SOME HARM TO THE SETTING OF THE LISTED BUILDINGS AND THE BTMS WITHIN THE CA ON THAMES BANK, AND ON THE SIGNIFICANCE OF CA33 WHEN SEEN FROM VIEWPOINTS ON THE RIVER, OPPOSITE BANK AND CHISWICK BRIDGE.**

17. Presently, the existing brewery buildings create a harsh and unrelieved backdrop, lacking any scale references and having an industrial character. They are to be replaced with buildings that have a more sympathetic, residential character, and a varied form, with skyline gaps.
18. We consider those components of the development to represent an enhancement, or at least, no worse than what is there.
19. Blocks 16, 17 and 18 do represent a materially changed setting, which does cause a harm to the Conservation Area.
20. The skylining of the CA to the south-west principally affects the vegetated character, which is the product of a mature tree canopy, with traditionally designed modern developments glimpsed through it.
21. We agree this causes a degree of less than substantial harm to the Conservation Area, and in calibrating the harm we have regard to the following considerations; first it is not a direct impact but one of setting; second, it affects only part of



the CA; and third, the separating distance between the new built form and the viewer is a factor in the experience of this part of the CA's setting.

22. As a consequence, we identify a low order of LTS harm. This harm is capable of amelioration at reserved matters stage by adherence to the principles set out in the reserved matters stage. This harm is to be set out in the Section 72 balance against benefits to CA, which are considerable. The built heritage ES Chapter prepared by Waterman finds the overall effect to be Minor Beneficial.

**C) BOUNDARY/PERIMETER WALLS TO EASTERN SECTION OF SITE - THERE WILL BE SOME HARM CAUSED BY THE REMOVAL OF BOUNDARY WALLS AND REMAINS OF BUILDINGS ALONG MORTLAKE HIGH STREET, AND THEREFORE TO THE SIGNIFICANCE OF THIS PART OF MORTLAKE CA33 DUE TO THE LOSS OF HISTORIC FABRIC WHICH IS OF BOTH HISTORICAL AND ARCHITECTURAL INTEREST.**

23. We agree that the removal of the wall results in a degree of less than substantial harm – it is acknowledged that these existing walls have historic interest because of their age and the evidence they represent for the former industrial use of the site. They are of completely typical construction.

24. Notwithstanding, they are altered and unsympathetically extended in parts, and the older brewery buildings they relate to don't survive so they have lost a functional context. As a consequence, notwithstanding their historic interest, the walls have a harsh townscape character and create an unwelcoming environment, undermining the enjoyment of the CA.

25. The delivery of the site allocation would necessarily require the removal of these anyway, because they are not conducive to the development of a modern residential-led mixed use development. As a consequence, any harm to the CA is a low order of less than substantial. The compensating benefit would be the delivery of a high quality scheme enhancing the CA.

**D) BUILDING 10 UNBALANCED AND OVERSCALED, IMPACTING UPON ADJOINING BTMS AND CONSERVATION AREA.**

26. Building 10 has a strong vertical rhythm, drawn from the windows, taken with the regular storey bands, which come together to form a well-articulated and modelled façade.

27. In views from the east (see View 8), this would be approached in the context of a roofscape of no particular quality, with a set-back upper storey in contrasting lighter materials.

28. Notwithstanding the change in scale, we think the character, materials and the detailed design will ensure an acceptable and appropriate relationship and will not dominate the scene.

29. Moving further west along Mortlake High Street, this part of the Site presents a very harsh boundary, and so the new building would be an improvement through the provision of a new active frontage and street vitality.

30. Particularly within this local context, there is some variety and richness to the elevation through materials, detailed design, and introduction of certain points of activity.

31. Overall, and taking all of this into account, we conclude that there is no harmful setting effect on the buildings of townscape merit or, on balance, the Conservation Area.

**GLA**

32. This section responds to comments made by the GLA in the Stage 1 response.

33. Heritage considerations are addressed at paragraphs 75-78 of the GLA response. Some of these replicate comments made by the Council, and relate to the proposals' effect on the setting of the Maltings Building and Mortlake Conservation Area, both of which are considered above.
34. We note that paragraph 75 does not differentiate between harm caused to the Conservation Areas (Mortlake and Mortlake Green) and listed buildings along the Thames Bank, which are designated heritage assets, and the three Buildings of Townscape Merit within the site (the Maltings, Bottling Building and Hotel).
35. For the avoidance of doubt, and as a matter of procedure, we assume that the less than substantial harm referred to in paragraph 77 (and the considerable importance and weight attached to any harm) is applied by the GLA only to the Conservation Areas and grade II listed buildings (the designated heritage assets). The effect of proposals upon non-designated heritage assets requires a 'balanced judgment', having regard to the scale of any harm or loss, and the significance of the asset (paragraph 203, NPPF).
36. We turn first to the effect on the Conservation Areas.

**WHILST THE REDISTRIBUTED MASSING OF THE SCHEME HAS REDUCED THE IMPACT ON THE SETTING OF A NUMBER OF THE HERITAGE ASSETS IN KEY VIEWS FROM THE RIVER, GLA OFFICERS CONSIDER THAT THE APPLICATION WOULD STILL RESULT IN LESS THAN SUBSTANTIAL HARM TO THE SIGNIFICANCE OF HERITAGE ASSETS AS A RESULT OF THE FOLLOWING IMPACTS:**

**HARM TO THE SIGNIFICANCE OF THE MORTLAKE CONSERVATION AREA OWING TO IMPACT ON SETTING FROM HEIGHT AND MASSING AND TO THE SETTING OF THE MALTINGS BUILDING WHEN VIEWED FROM CHISWICK BRIDGE AND CHISWICK BANK**

37. This point is addressed above at paragraphs 5-16.

**HARM TO THE SIGNIFICANCE OF THE GRADE II LISTED RESIDENTIAL PROPERTIES SITUATED ON THAMES BANK BETWEEN SHIP LANE AND CHISWICK BRIDGE, INCLUDING THAMES COTTAGE, TUDOR LODGE, THAMES BANK HOUSE, LEYDON HOUSE AND RIVERSIDE HOUSE OWING TO IMPACT ON SETTING FROM THE PROPOSED HEIGHT AND MASSING OF THE SCHEME.**

38. This is addressed at paragraphs 17 – 22 above.

- **LOSS OF SOME HISTORIC FABRIC IN THE MALTINGS BUILDING RESULTING FROM WORKS NECESSARY FOR ITS ADAPTATION FROM INDUSTRIAL TO COMMUNITY AND RESIDENTIAL USES;**
- **LOSS OF SOME HISTORIC BUILDING FABRIC IN THE FORMER HOTEL AND FORMER BOTTLING PLANT;**
- **DEMOLITION OF THE MAJORITY OF FORMER BRICK BOUNDARY WALLS;**

39. Turning now to non-designated heritage assets, the GLA identifies a degree of harm arising from the loss of historic fabric in the Maltings, Former Hotel and Former Bottling Plant buildings.
40. As noted above, these buildings are non-designated heritage assets (Buildings of Townscape Merit). Their principal significance lies in their external expression, which contributes to their surroundings as evidence of the historic development of the brewery complex, and to local distinctiveness as part of a varied townscape.
41. Whilst the conversion leads to the loss of some fabric, this is necessary to enable the buildings' adaptation for a new, long term use – which we note that the GLA also identifies as beneficial. Paragraph 76 also identifies the restoration of the buildings' most significant façades, the return of the original use to the hotel building, and the restoration of other features of heritage value within the site.

42. The effect on the brick walls is considered above at paragraphs 23-25 above.

**IN ACCORDANCE WITH THE NPPF, INCIDENCES OF ‘LESS THAN SUBSTANTIAL HARM’ SHOULD BE WEIGHED AGAINST THE PUBLIC BENEFITS OF THE PROPOSAL, INCLUDING HERITAGE RELATED PUBLIC BENEFITS. CONSIDERABLE WEIGHT AND IMPORTANCE MUST BE ATTACHED TO THE HARM CAUSED BY THE PROPOSALS TO SURROUNDING HERITAGE ASSETS IN ANY BALANCING EXERCISE. AS THE APPLICATION WOULD HARM HERITAGE ASSETS, THE PROPOSALS CONFLICT WITH LONDON PLAN POLICY HC1**

43. We agree that any harm to the significance of a designated heritage asset should require ‘clear and convincing justification’, as per paragraph 194 NPPF, and stands to be weighed against the public benefits (including heritage benefits) of the proposals as set out at paragraph 196 NPPF.

44. Policy HC1 says, at the end of limb C that ‘*development proposals should avoid harm and identify enhancement opportunities by integrating heritage considerations early on in the design process.*’ We do not interpret this to mean that any identification of harm means that a proposal is in conflict with the policy.

45. The proposals have been developed mindful of the significance of heritage assets both within and in the setting of the Site, and indeed the GLA response acknowledges that the ‘most significant’ façades of the Hotel and Bottling Plant are retained and restored (and that these works are beneficial).

46. With regard to the designated heritage assets, the NPPF allows for the balancing of harm against benefit (either as an internal heritage balance as described in Palmer, or with heritage benefits counted as public benefits). In either case, and on our reading of HC1, any harm caused by the proposals is capable of being outweighed by the benefits of the proposals.

## **14. Affordable Housing Response**

Prepared by BNP Paribas

Dated 22nd July 2022

(pages 308 – 313)



## **STAG BREWERY CONSULTEES RESPONSES**

### **Affordable housing team comments**

**Affordable housing provision falls well short of the strategic 50% target - Further negotiation concerning scheme viability and the inputs that sit behind this is therefore required to seek the maximum affordable housing provision that can be viably provided on site.**

*BNPPRE Response: The Council has appointed Carter Jonas to review the inputs and the appraisal inputs are largely agreed, with some minor differences on sales values and construction costs. As the appraisal currently stands, even if Carter Jonas' position is adopted, the proposed provision of 15% affordable (20% rented and 80% shared ownership) exceeds the maximum viable proportion, even when growth is applied to the appraisal. Further negotiation on scheme viability will not result in an increase in affordable housing.*

*Clearly the scheme will be subject to periodic viability reviews after implementation. If sales values exceed the current forecasts, then any surplus (after addressing the deficit) will be available for affordable housing.*

#### **a) The content and quantum of Affordable Housing**

##### **i. Inconsistency between Planning Statement and FVA in terms of affordable housing:**

*BNPPRE response: The FVA tests 15% affordable housing with a range of tenure mixes. Further options have been provided to officers to indicate the trade-offs between overall affordable housing percentage and tenure split. Although a degree of difference remains on private sales values, this difference is modest and will not alter the outcome of this additional analysis.*

**iv. Require confirmation that RHP / RP have had the opportunity to comment in detail on the latest iteration of the proposals, not just for the purposes of financial viability testing, but also to ensure that they are comfortable with the revised layouts of the residential elements of the scheme to support the efficient management of the homes and to ensure that service charges are affordable to future residents.**

*Gerald Eve's affordable housing team have been liaising with RHP and we understand that they are content with the revised layouts and management arrangements, the latter being unchanged from the previous iteration of the scheme.*

#### **b) Financial Viability**

##### **i. The final content of the affordable housing to be delivered is dependent on ongoing discussions regarding viability**

*BNPPRE response: discussion with Carter Jonas are ongoing, but as noted above, the differences are minimal and their current position accords with the Applicant's (i.e. that 15% affordable housing with a 20% rent / 80% shared ownership split exceeds the maximum viable proportion).*

##### **ii. The following are noted from a review of the submitted FVA;**

**Section 4.11 - states that the final sales will complete 12 months after completion. This seems unusual for a London location where sales to date have been extremely strong and many (particularly private) homes are sold off plan. Scrutiny of sales processes and the timing of income for the developer should be undertaken as this may have an impact on the on-going viability of the scheme (particularly with regard to potential Review Mechanisms).**

*BNPPRE response: this is a matter that Carter Jonas have reviewed and expressed no concerns. The Council need to bear in mind that by the time the scheme reaches its final phase, immediate demand generated by early marketing will have been taken up by the earlier phases. There is always a 'tail' in the final phase.*



Overall, the development programme applied in the FVA is **extremely** ambitious, with all phases completed and sold within 5 years. Assuming 15% affordable, there would be 922 private units for sale, reflecting a sales rate of 15 units per month from implementation. No other scheme in London has achieved such an ambitious delivery and sales rate.

**Development phasing – further consideration should be given to the phasing of the scheme development and how it relates to wider scheme viability. As it currently stands the first phase development delivers a significant proportion of private homes, with only 48 intermediate homes being delivered. All of the affordable rented homes are being delivered in the later phase. The proposed phasing is not acceptable given the significant level of market housing proposed in the detailed Phase 1, the low level of affordable housing proposed in Phase 1 and the absence of any affordable rented housing in this Phase.**

*BNPPRE response: bringing affordable housing forward into the first phase would have a detrimental impact on viability which would in turn necessitate a reduction in the overall affordable housing percentage. The current phasing was discussed at length with the GLA and agreed.*

**Further detail / justification is required to understand further the Phasing timescales for both the school application and Phases 1 and 2 and whether there is any overlap on when these phases commence on site and complete**

*BNPPRE response: the school is irrelevant to the viability of the Application Scheme as the school construction costs are assumed to be borne by the EFA.*

*As noted above, the phasing is ambitious and already reflects a large degree of overlap between the phases. The phasing is already pushing the boundaries of realism and there is no scope to compress the delivery programme.*

**iii. Should an agreement on scheme viability be reached the appropriate viability review clauses should be included within any s106;**

*BNPPRE response: As noted above, the appraisal inputs are largely agreed, with a very minor difference on sales values. Although Carter Jonas identified a very small potential reduction in construction costs, this has since been agreed at the Applicant's original costs. Notwithstanding, the Section 106 agreement will naturally include review provisions as required by the London Plan.*

**o Pre-commencement review to allow the consideration of whether the addition of Council grant funding could deliver an enhanced affordable housing offer.**

*BNPPRE response: There will be an early stage review in the Section 106 agreement and this will provide an opportunity for the Council to consider providing grant funding.*

**o Pre-implementation – if development has not occurred within 24 months.**

**o Mid Stage Review – Potentially at 80% completion of Phase 1**

**o Late-Stage Review – At the sale of 75% of the open market homes**

**c) Phasing**

*BNPPRE response: Noted, timings of the review to be subject to further discussions.*

**i. The timing of the affordable units must be secured in the S106 agreement, to ensure early completion of the affordable homes in Phase 2.**

*BNPPRE response: naturally, provisions will be incorporated in the Section 106 agreement on timing of delivery of the affordable housing.*

**ii. The following concerns are raised that need to be resolved prior to decision:**

**o lack of clarity of when the affordable housing would be provided and the trigger for affordable housing provision being built and completed**



*BNPPRE response: these issues will be addressed in the S106 HOTs/draft agreement.*

**o Currently 48 intermediate homes are to provided in Phase 1, with the remaining 165 general needs rented homes affordable homes to be completed in Phase 2. The significant back ending of the affordable housing delivery is a risk**

**o Recommend:**

- **some rented homes within Phase 1 – Building 10?**
- **early phasing of delivery of the affordable housing in Phase 2 is also secured**

*BNPPRE response: It should be noted that the 15% affordable housing provision is based on a tenure split of 20% rent and 80% shared ownership. Other tenure splits can be accommodated but would necessitate a reduction in the overall affordable percentage below 15%. Details of the affordable housing percentages that can be provided with alternative tenure mixes have been provided to the case officer.*

*As noted previously, earlier delivery of affordable housing would have a detrimental impact on viability which would necessitate a reduction in the overall percentage.*

**iii. The scheme must be subject to viability reviews in accordance with the Mayor's Affordable Housing and Viability SPD and the Council's Affordable Housing SPD in order to review the viability of providing affordable housing:**

- **prior to first start on site,**
- **prior to start on site of the second phase on approval of a detailed scheme**
- **final scheme review given the level of affordable housing**

*BNPPRE response: It is unclear whether or not the Housing Team have seen drafts of the Section 106 for the previous iteration of the proposals submitted to the GLA, but all these matters have been addressed, as required by the London Plan.*

#### **d) Tenure, Rents and Affordability**

**i. Concerns of the unit and tenure mix reflected in some of the options in the FVA, particularly where they depart from the 80/20 rented/intermediate split outlined in Local Plan policy. Any mix that proposes a significant proportion of intermediate homes will be resisted.**

*BNPPRE response: the 15% affordable housing offer is based on a 20% rent and 80% shared ownership mix. Alternative tenure mixes can be provided, but this would necessitate a reduction in overall percentage – these percentages have been shared with the case officer.*

**ii. Recommend discussions to ascertain whether the number of LAR homes can be improved through further viability negotiations and/or with the support of the Council's Housing Capital Funding.**

*BNPPRE response: there is currently no scope to increase the number of LAR homes without a reduction in the overall percentage of affordable housing. Clearly if the Council's preference is for rented housing, this can be accommodated as discussed with the Case Officer.*

**iii. Request confirmation that genuinely affordable housing is being delivered including accounting for service charge levels that would be due. (It is noted LAR/social rent is exclusive of service charges and these may be a significant additional cost)**

*BNPPRE response: the affordable housing will be in separate blocks so that the acquiring RP has control over services charges.*

#### **e) London Affordable Rented Housing**

**i. London Affordable Rented homes are proposed as the tenure for the general needs rented elements of the scheme. However, the new Affordable Homes Programme 21-26 promotes social rent as the preferred general needs tenure, and as such the availability of grant funding**





to support this scheme (and in particular any grant for additional affordable housing over and above that identified within the FVA) may be limited. It should also be noted that as a scheme referable to the London Mayor the GLA are likely to promote social rent as the preferred tenure.

ii. As part of the viability discussions consideration is given to social rent as the preferred tenure

*BNPPRE response: Social rented housing could be accommodated, but this would attract a lower capital value, so the overall percentage of affordable housing would fall as a result.*

#### **f) Intermediate Housing**

i. The application seeks to offer a mix of both shared ownership and London Living Rent homes. However, it should be ensured that any intermediate homes remain genuinely affordable to Richmond residents, and to secure this the homes should meet the requirements of the Intermediate Housing Policy Statement. For clarity the following are required:

- two thirds of all intermediate homes are affordable to those on household incomes of up to £50,000 per annum with the remaining third affordable to those on household incomes up to the GLA intermediate housing threshold of £90,000 per annum for shared ownership
  - The applicant/RP demonstrates affordability of sales in each scheme at an average household income of £56,200,
  - The applicant/RP are required to demonstrate in marketing plans prior to launching sales that two thirds of the homes are affordable at gross household incomes of below £50,000
- ii. These affordability requirements should be cross-checked as negotiations on scheme viability progress to ensure that the assumed values for shared ownership homes accurately reflect these affordability requirements.
- iii. Any future S106 agreement must incorporate clauses that ensure the Council's adopted affordability criteria for shared ownership and intermediate rent homes is to be complied with.

*BNPPRE response: The FVA assumes that the intermediate element is provided as shared ownership. Introducing London Living Rent would have a significant impact on capital value, resulting in a worsening viability. LLR could be accommodated in the Scheme, but this is likely to reduce the overall affordable percentage.*

*The Applicant has been informed by the Case Officer that one third of shared ownership units should be affordable to households in receipt of incomes of up to £47,000, whereas the comments above indicate that this should be two thirds. The FVA currently assumes that broadly one third of shared ownership units are affordable to households in receipt of incomes of £50,000. If this is extended to two thirds, there will be an impact on capital values.*

#### **g) Service Charges**

- i. Overall housing costs should be affordable to the Council's income threshold for intermediate as well as those which would be assumed for general needs rent.
- ii. Provision should be made in any Section 106 to secure affordability having regard to confirmed service charge levels.

*BNPPRE response: the affordable housing is provided in separate blocks and the acquiring RP will have control over service charges for intermediate units.*

#### **h) Wheelchair Accessible homes - s106 to ensure:**

**A. Council's minimum requirement for 10% of the units are to be provided and to ensure compliance with M4(3)**

**B. enable the Specialist Occupational Therapist to liaise with the developer in order to ensure that the identified homes are constructed to Building Regulation requirements (M4(3)(2)(b).**

i) **Amenity Space** - Details of the arrangements for the management of the communal amenity areas to avoid segregation and to ensure that all residents of affordable housing blocks have access to amenity space areas should be secured in the Section 106 agreement.

j) **Parking** - Confirmation that the parking for the wheelchair homes is genuinely accessible for the end user is required.





*BNPPRE response: These matters are addressed by Local Plan policies and have been addressed in the Design and Access Statement.*

**k) Public Grant funding**

**i. Need for discussions prior to determination with the aim of the adjusting the approved affordable housing (unit numbers and/or tenure mix) with public grant (Richmond Housing Capital Programme funding)**

*BNPPRE response: it would be helpful if the Housing Team could provide an indication of how much grant funding may be available so this can be tested. However, given that the proposed 15% affordable exceeds the viable maximum percentage, significant amounts of grant would be required to provide additional units.*

**ii. review mechanisms developed to consider both the level and tenure mix of affordable housing delivered to achieve a better level of policy compliancy.**

*BNPPRE response: the standard GLA SPG formulae make provision for tenure mix.*

**iii. review to assess the impact of Council Housing Capital Grant support (if not confirmed prior to determination) to improve the number of affordable units and/or to improve the tenure mix.**

*BNPPRE response: the GLA SPG formulae can make provision for Council grant as part of the 'Review Stage GDV'.*

**l) S106 Requirements**

**i. affordability of the intermediate housing across a range of household incomes through the share purchased and the level of rent on the unsold equity including a requirement that the Registered Provider should set the equity share and rent on the unsold equity in order to achieve the Council's requirement that homes are affordable for a household income of £50,000.**

**ii. confirmation the affordability of all the affordable homes takes account of service charges.**

**iii. Review clauses to increase both numbers and increase in the number of homes for Affordable Rent so the scheme meets a tenure mix which is more compliant with Local and London Plan requirements) through the application of Richmond Housing Capital Grant funding and through review mechanisms:**

**iv. Ensuring that the inputs, including deficit position, are fully evidenced and tested.**

**v. An Early Stage Review if the planning permission is not commenced within and agreed timescale.**

**vi. A Public Grant Review prior to commencement to assess the potential for public grant (both Mayoral and from the Council's Housing Capital Programme) to increase the amount and/or alter the tenure of the affordable housing to improve affordable rented delivery.**

**vii. residents' access to the proposed communal areas**

**viii. Consultation and engagement with Council's Specialist Occupational Therapist**

*BNPPRE response: this appears to be a repeat of earlier points.*

## **15. Impact of Reduction in Basement on Scheme Viability**

Prepared by BNP Paribas

Dated 22nd July 2022

(pages 314 – 328)

## STAG BREWERY IMPACT OF REDUCTION IN BASEMENT ON SCHEME VIABILITY

In its Stage One report dated 22 June 2022, the GLA raised concerns in regard to the impact of the scale of basement in the Stag Brewery development on scheme viability. Paragraph 60 notes that the cost of the basement is circa £66.9 million, but the direct value generated by car parking equates to £20.4 million. Paragraph 61 asserts that *'the design decision to incorporate such a large basement within the scheme has a substantial impact on the overall viability of the scheme'*. The GLA goes on to suggest later in the same paragraph that *"the applicant should be required to demonstrate that the provision of the basement in this instance has not come at the cost of affordable housing provision within the scheme"*.

In the same paragraph, the GLA observe that the capital cost of the cinema (£6.9 million including fit out) is higher than the income (£4.1 million). Although the cinema revenue may not cover all of its construction costs, the cinema will add value by supporting footfall to the retail and helping to create the town centre that is required by the Council's planning brief. If the cinema were removed, there would be an impact on achievable rents for the retail units and private sales values.

It is important to note that the Site is located within Flood Risk Zone 3 and as a consequence is required to provide flood mitigation, of which the basement forms a significant part.

The Development is also located in an area with a Public Transport Accessibility Level of 2 (where 0 is the lowest and 6b is the highest level of accessibility) and therefore a relatively high ratio of car parking will be required to ensure the units are marketable. The proposed development could never feasibly be provided as a car free development and public realm considerations, alongside flood risk mitigation requirements, mean that at least some basement car parking will be required.

On the previous scheme determined by the Mayor, GLA officers considered that 478 parking spaces (400 for residential and 78 for commercial use) would be acceptable, equating to a ratio of 0.32 spaces per unit (excluding the commercial). Squire & Partners have modelled a reduction in the 2022 scheme from 400 to 337 residential spaces, equivalent to the same ratio of 0.32 spaces per unit and a reduction from 78 to 71 commercial spaces (see Appendix 1). Gardiner & Theobald have advised that the reduction in cost arising from this reduced scale of the East basement would amount to £3.97 million (see Appendix 2).

**Table 1: Car parking provision in current and previous application**

	2020 scheme	2022 scheme – basement as submitted	2022 scheme following revision to basement	Change
Residential spaces	400	400	337	-63
Residential units (See Note 1)	1,243	1,048	1,048	
Ratio of spaces to units	0.32	0.38	0.32	
Total commercial GIFA	13,926	12,623	12,623	
Commercial parking spaces	78	78	71	-7
Parking per 100 square metres	0.56	0.62	0.56	
<b>Total spaces</b>	<b>478</b>	<b>478</b>	<b>408</b>	<b>-70</b>

(Note 1: excludes town houses which have surface car parking spaces)

Although there is a cost saving arising from reducing the scale of the basement, it is also necessary to reflect the reduction in income. In the March 2022 Financial Viability Assessment ('FVA'), we assumed that each of the residential car parking spaces would be sold for £50,000 per space. The



reduction in basement car parking modelled by Squire & Partners will result in a reduction from 408 to 337 spaces, and a consequent loss of income equating to £3.15 million (i.e. 63 spaces x £50,000 per space).

The net impact of reducing the basement car park is therefore a **net improvement of** circa £0.82 million (plus fees and finance). However, this does not reflect any consequential impacts arising from reductions in sales values or extended sales periods resulting from the reduction in car parking provision. These negative impacts are likely to exceed the net cost saving of £0.82 million.

BNP Paribas Real Estate  
29 July 2022

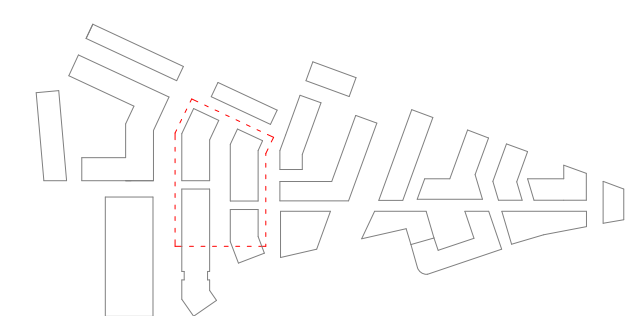
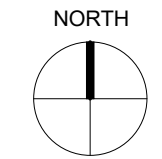


**APPENDIX 1: SQUIRE AND PARTNERS REVISED BASEMENT**





NOTES:  
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- KEY**
- 70 Residential Spaces
  - 5 Motorbike Spaces
  - 649 Cycle Spaces



Revision description	Date	Check	Rev
FOR INFORMATION	22/07/22	RKB	G
LBURT 2 APPLICATION AMENDMENTS	21/07/22	BJ	F
LBURT 2 APPLICATION	04/02/22	BJ	E
DRAFT FINAL HYBRID SUBMISSION	19/01/22	RKB	D
GLA SUBMISSION	27/04/20	BJ	C
DRAFT GLA SUBMISSION	24/01/20	KH	B
FINAL DRAFT PLANNING APPLICATION	21/10/19	KH	A
LEGAL REVIEW	13/09/19	KH	-

## SQUIRE & PARTNERS

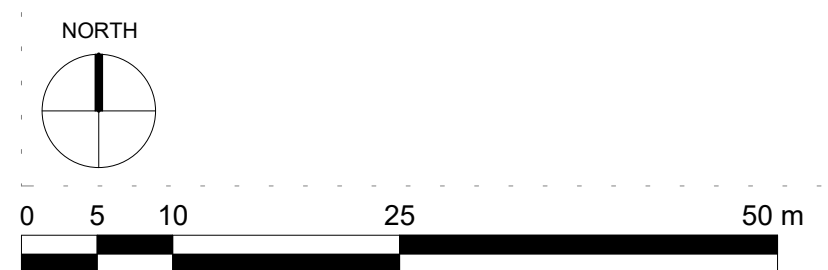
The Department Store  
 248 Ferndale Road London SW9 8FR  
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Project  
**Stag Brewery**  
 Richmond

Drawing  
**PROPOSED DEVELOPMENT AREA 02**  
**BASEMENT PLAN**

Drawn	Date	Scale
RKL	06/09/19	1:500 @ A1 1:1000 @ A3
Job Number	Drawing number	Revision
18125	C645_Z2_P_B1_001	G





**APPENDIX 2: GARDINER & THEOBALD COST REVISIONS**



# Stag Brewery

## 2022 Scheme Planning Cost Estimate - East Basement (4Q 17 prices) - REDUCED EXTENT

### Phase A

Job No: 34196

No.	Description	Quantity	Unit	Rate £	Cost £
Basement					
1	Basement Perimeter Walls				1,279,009
2	Basement Slabs				7,037,327
3	Shear Walls and Columns				493,424
4	Ground Floor Slab				2,571,494
5	Internal Walls and Doors				283,531
6	Internal Finishes and Fittings				963,273
7	Mechanical and Electrical Installations				1,592,110
8	Sub Total				14,220,167
9	Main Contractor Preliminaries		%	16.00	2,275,227
10	Main Contractor OH&P		%	5.00	824,770
11	Total				17,320,164
					17,320,000

Uplift to 4Q 21 prices **18,540,000**

GIA (m2) 7,056

GIA (sq ft) 75,945

Basement Perimeter Walls					
1	Sheet Piling				
2	Sheet piling to basement perimeter, assumed 16m deep, 450mm overall thick sheet piles, fully welded, painted to interior face	4,448	m <sup>2</sup>	250.00	1,112,000
3	E.O. for 200 x 200 x 18 RSA angle to tie into raft slab (54.3kg/m)	15	tn	2,500.00	37,739
4	E.O. for 150 x 150 x 10 RSA angles to top of sheet piles, both sides (23kg/m)	13	tn	2,500.00	31,970
5	Capping Beam				
6	Allowance for capping beam to basement perimeter, details TBC	278	m	350.00	97,300
7	Lining Walls - None detailed on WSL markup				
8	Perimeter in situ concrete lining walls as per WSL markup, 350mm thick as per WSL info, 3.7m high - None shown on markup		m <sup>3</sup>	210.00	
9	Reinforcement to above, 250kg/m <sup>3</sup> as advised by WSL		tn	1,250.00	
10	Formwork to above, one side		m <sup>2</sup>	75.00	
11	Waterproofing				
12	Waterproofing to walls, cavity drain, block wall etc - advised not required		Excl		
					1,279,009

Basement Slabs					
1	Excavation and Disposal				
2	Excavation for main basement area, assumed 5.0m deep from average existing site level of 6m	35,278	m <sup>3</sup>	5.00	176,388
3	Disposal of above - assumed non hazardous	35,278	m <sup>3</sup>	50.00	1,763,876
4	E.O. allowance for contamination (15%)	5,292	m <sup>3</sup>	75.00	396,872
5	E.O. allowance for obstructions (15%)	5,292	m <sup>3</sup>	100.00	529,163
6	Allowance for ground water removal/management as per requirement set out in Watermans environmental statement (Demo, Refurb and Construction)	1	Item	40,000.00	40,000
7	Raft Slab				
8	Build up to raft slab, hardcore, blinding etc, assumed 350mm thick	2,469	m <sup>3</sup>	160.00	395,108
9	Raft, 1000mm thick as per WSL info - assumed waterproof concrete	7,056	m <sup>3</sup>	225.00	1,587,489
10	Reinforcement to above, 190kg/m <sup>3</sup> as per WSL info	1,341	tn	1,250.00	1,675,682
11	In situ concrete to form upstand / channel to perimeter of basement; 450mm high by 150mm wide as advised by WSL	19	m <sup>3</sup>	210.00	3,941
12	Reinforcement to above, assumed 150kg/m <sup>3</sup>	3	tn	1,250.00	3,518
13	Formwork to concrete upstands	250	m <sup>2</sup>	70.00	17,514

# Stag Brewery

## 2022 Scheme Planning Cost Estimate - East Basement (4Q 17 prices) - REDUCED EXTENT

### Phase A

Job No: 34196

No.	Description	Quantity	Unit	Rate £	Cost £
14	E.O. for lowered areas for tanks etc - scope TBC	1	Item	50,000.00	50,000
15	E.O. for forming lift pits	9	nr	5,000.00	45,000
16	Allowance for DPM and insulation to slab	7,056	m <sup>2</sup>	25.00	176,388
17	Allowance for underslab drainage	7,056	m <sup>2</sup>	25.00	176,388
18	Waterproofing				
19	Waterproofing to slab - second layer of defence - advised as not required		Excl		
					<u>7,037,327</u>
Shear Walls and Columns					
1	Columns				
2	In situ concrete columns to basement, 450mm x 450mm, 3.7m high, assumed 236nr	119	m <sup>3</sup>	210.00	25,017
3	Reinforcement to concrete columns, 295kg/m <sup>3</sup> as advised by WSL	35	tn	1,250.00	43,929
4	Formwork to 450mm x 450mm concrete columns, basic finish	1,059	m <sup>2</sup>	75.00	79,421
5	In situ concrete columns to basement, 700mm x 300mm, 3.7m high, assumed 10nr	20	m <sup>3</sup>	210.00	4,242
6	Reinforcement to concrete columns, 295kg/m <sup>3</sup> as advised by WSL	6	tn	1,250.00	7,449
7	Formwork to 700mm x 300mm concrete columns, basic finish	192	m <sup>2</sup>	75.00	14,430
8	E.O. for column shear heads, 175kg/m <sup>2</sup> - TBC	185	nr	100.00	18,500
9	Shear Walls				
10	In situ concrete core walls; 250mm thick as advised by WSL	172	m <sup>3</sup>	210.00	36,198
11	Reinforcement to core walls; 220kg/m <sup>3</sup> as advised by WSL	38	tn	1,250.00	47,403
12	Formwork to core walls; both sides, basic finish	1,379	m <sup>2</sup>	75.00	103,424
13	Ramp Walls				
14	In situ concrete walls; assumed 250mm thick	105	m <sup>3</sup>	210.00	21,950
15	Reinforcement to walls; assumed 220kg/m <sup>3</sup>	23	tn	1,250.00	28,744
16	Formwork to walls; both sides, basic finish	836	m <sup>2</sup>	75.00	62,715
					<u>493,424</u>
Ground Floor Slab					
1	500mm thick ground floor slab to external landscaped areas				
2	In situ concrete to ground floor slab above basement to external landscaped areas/roads, 500mm thick as per WSL info	2,143	m <sup>3</sup>	200.00	428,500
3	Reinforcement to above, 220kg/m <sup>3</sup> as per WSL info	471	tn	1,250.00	589,188
4	Formwork to soffit, basic finish	4,285	m <sup>2</sup>	70.00	299,950
5	Formwork to sides	253	m <sup>2</sup>	70.00	17,710
6	250mm thick ground floor slab to residential areas				
7	In situ concrete to ground floor slab to Block 2 and 3 residential uses, 250mm thick as per WSL info	416	m <sup>3</sup>	200.00	83,115
8	Reinforcement to above, 260kg/m <sup>3</sup> as per WSL info	108	tn	1,250.00	135,062
9	Formwork to soffit, basic finish	1,662	m <sup>2</sup>	70.00	116,361
10	300mm thick ground floor slab to retail areas				
11	In situ concrete to ground floor slab to Block 2 retail use, 300mm thick as per WSL info	332	m <sup>3</sup>	200.00	66,492
12	Reinforcement to above, 220kg/m <sup>3</sup> as per WSL info	73	tn	1,250.00	91,427
13	Formwork to soffit, basic finish	1,108	m <sup>2</sup>	70.00	77,574
14	Steps to ground floor slab				
15	In situ concrete to steps in ground floor slab for changes in levels between residential and retail uses, assumed 1.5m high and 500mm thick	93	m <sup>3</sup>	200.00	18,600
16	Reinforcement to above, assumed 260kg/m <sup>3</sup>	24	tn	1,250.00	30,000
17	Formwork to steps in ground floor slab; both sides	372	m <sup>2</sup>	70.00	26,040
18	In situ concrete to steps in ground floor slab for changes in levels between residential use and landscaped podium, assumed 1.6m high and 500mm thick	218	m <sup>3</sup>	200.00	43,600

## Stag Brewery

### 2022 Scheme Planning Cost Estimate - East Basement (4Q 17 prices) - REDUCED EXTENT

#### Phase A

Job No: 34196

No.	Description	Quantity	Unit	Rate £	Cost £
19	Reinforcement to above, assumed 260kg/m3	57	tn	1,250.00	71,250
20	Formwork to steps in ground floor slab; both sides	874	m <sup>2</sup>	70.00	61,180
21	In situ concrete to steps in ground floor slab for changes in levels between retail use and landscaped podium, assumed 0.95m high and 500mm thick	52	m <sup>3</sup>	200.00	10,400
22	Reinforcement to above, assumed 260kg/m3	14	tn	1,250.00	17,500
23	Formwork to steps in ground floor slab; both sides	209	m <sup>2</sup>	70.00	14,630
24	Transfer Beams				
25	In situ concrete to transfer beams; 1000mm deep x 500mm wide as advised by WSL	105	m <sup>3</sup>	210.00	22,050
26	Reinforcement to the above; 150kg/m3 as advised by WSL	16	tn	1,250.00	20,000
27	Formwork to transfer beams	527	m <sup>2</sup>	75.00	39,525
28	E.O. for beams / transfer structures yet to be detailed - scope TBC - assumed limited	1	Item	50,000.00	50,000
29	Basement Perimeter Detail - 3 (As advised by WSL)				
30	In situ concrete to transfer beam; assumed 600mm deep x 500mm wide	1	m <sup>3</sup>	210.00	210
31	Reinforcement to the above; assumed 150kg/m3	1	tn	1,250.00	1,250
32	Formwork to transfer beams	4	m <sup>2</sup>	75.00	300
33	Tree Pits				
34	Allowance for forming tree pits within ground floor slab - Size and quantity to be confirmed	1	Item	75,000.00	75,000
35	Ramp				
36	In situ concrete to ramp, 350mm thick as advised by WSL	181	m <sup>3</sup>	210.00	38,073
37	Reinforcement to above, 215kg/m3 as advised by WSL	39	tn	1,250.00	48,724
38	Formwork to above	518	m <sup>2</sup>	75.00	38,850
39	Formwork to sides	79	m <sup>2</sup>	75.00	5,933
40	Movement Joint				
41	Allowance for movement joint in Phase A ground floor slab to suit phasing	66	m	500.00	33,000
					2,571,494
	Internal Walls and Doors				
1	Internal Walls				
2	Internal blockwork walls to basement, assumed 140mm thick, 3.7m high	1,420	m <sup>2</sup>	110.00	156,247
3	Allowance for enhanced fire / acoustic requirements to plant areas e.g. energy centre - assumed 20% of total wall area	284	m <sup>2</sup>	100.00	28,409
4	Allowance for other walls yet to be reflected on plan -10%	142	m <sup>2</sup>	110.00	15,625
5	Internal Doors				
6	Allowance for single leaf internal doors to basement areas	8	nr	1,750.00	14,000
7	Allowance for double leaf internal doors to basement areas	24	nr	2,000.00	48,000
8	Allowance for riser doors to basement areas - assumed quantity	20	nr	800.00	16,000
9	E.O. allowance for fire / acoustic requirements to plant rooms - assumed 40% of doors	21	nr	250.00	5,250
					283,531
	Internal Finishes and Fittings				
1	Wall Finishes				
2	Allowance for emulsion paint to internal blockwork walls	2,841	m <sup>2</sup>	15.00	42,613
3	Allowance for drylining and emulsion paint to concrete shear walls (one side only)	689	m <sup>2</sup>	65.00	44,817
4	Allowance for paint to concrete columns	1,251	m <sup>2</sup>	15.00	18,770
5	E.O. allowance for tanking to plant rooms etc	1	Item	25,000.00	25,000
6	E.O. for enhanced finishes to building cores	4	nr	5,000.00	20,000
7	Floor Finishes				
8	Allowance for screed to basement areas	7,056	m <sup>2</sup>	35.00	246,943
9	Allowance for floor finishes to basement areas, assumed	7,056	m <sup>2</sup>	25.00	176,388

## Stag Brewery

### 2022 Scheme Planning Cost Estimate - East Basement (4Q 17 prices) - REDUCED EXTENT

#### Phase A

Job No: 34196

No.	Description	Quantity	Unit	Rate £	Cost £
	epoxy paint generally				
10	E.O. allowance for tanking to plant rooms etc	1	Item	25,000.00	25,000
11	E.O. for enhanced finishes to building cores	4	nr	5,000.00	20,000
12	Allowance for white lining to car park /motorbike spaces and associated circulation zones etc	140	Spaces	150.00	21,000
13	Ceiling Finishes				
14	Allowance for ceiling finish to basement areas, assumed paint to concrete soffits generally	7,056	m <sup>2</sup>	10.00	70,555
15	E.O. for enhanced finishes to building cores	4	nr	5,000.00	20,000
16	Fixed Fittings				
17	Allowance for signage	7,056	m <sup>2</sup>	5.00	35,278
18	Allowance for residential bike racks, assumed 2nr spaces per apartment (Buildings 2, 3 and 4)	372	nr	150.00	55,800
19	Allowance for commercial bike racks, assumed 1nr bike rack per 1,000sq ft GIA (see Phase B and C basement)	0	nr	150.00	0
20	Allowance for showers to commercial bike storage only, assumed 1 shower per 15nr bike spaces (see Phase B and C basement)	0	nr	7,500.00	0
21	Allowance for lockers to commercial bike storage area only (see Phase B and C basement)	0	nr	175.00	0
22	Allowance for other fixed fittings - scope TBC	7,056	m <sup>2</sup>	20.00	<u>141,110</u>
					<u>963,273</u>
	Mechanical and Electrical Installations				
1	MEP - Car Park				
2	Allowance for MEP installations to car parking areas	5,030	m <sup>2</sup>	125.00	628,688
3	MEP - Other Areas				
4	Allowance for MEP installations to other areas	2,026	m <sup>2</sup>	425.00	861,050
5	Allowance for car chargers - Say 20% of car parking spaces	28	nr	2,000.00	56,000
6	BWIC		%	3.00	<u>46,372</u>
					<u>1,592,110</u>

#### Notes

Costs updated in line with S&P Proposed Development Area 01 Basement Plan 18125\_C645\_Z1\_P\_B1\_001 Rev G as issued to G&T 22.07.22



# Stag Brewery

## 2022 Scheme Planning Cost Estimate - East Basement (4Q 17 prices) - REDUCED EXTENT

### Phase B and C

Job No: 34196

No.	Description	Quantity	Unit	Rate £	Cost £
14	E.O. for lowered areas for tanks etc - scope TBC	1	Item	80,000.00	80,000.00
15	E.O. for forming lift pits	18	nr	5,000.00	90,000.00
16	Allowance for DPM and insulation to slab	10,704	m <sup>2</sup>	25.00	267,600.00
17	Allowance for underslab drainage	10,704	m <sup>2</sup>	25.00	267,600.00
18	Waterproofing				
19	Waterproofing to slab - second layer of defence - advised as not required		Excl		
					<u>10,874,009.72</u>
Shear Walls and Columns					
1	Columns				
2	In situ concrete columns to basement, 450mm x 450mm, 3.7m high, assumed 354nr	182	m <sup>3</sup>	210.00	38,249.96
3	Reinforcement to concrete columns, 295kg/m3 as advised by WSL	54	tn	1,250.00	67,165.11
4	Formwork to 450mm x 450mm concrete columns, basic finish	1,472	m <sup>2</sup>	75.00	110,389.50
5	In situ concrete columns to basement, 700mm x 300mm, 3.7m high, assumed 30nr	23	m <sup>3</sup>	210.00	4,895.10
6	Reinforcement to concrete columns, 295kg/m3 as advised by WSL	7	tn	1,250.00	8,595.56
7	Formwork to 700mm x 300mm concrete columns, basic finish	222	m <sup>2</sup>	75.00	16,650.00
8	E.O. for column shear heads, 175kg/m2 - TBC	251	nr	100.00	25,100.00
9	Shear Walls				
10	In situ concrete core walls; 250mm thick as advised by WSL	294	m <sup>3</sup>	210.00	61,752.08
11	Reinforcement to core walls; 220kg/m3 as advised by WSL	65	tn	1,250.00	80,865.81
12	Formwork to core walls; both sides, basic finish	2,352	m <sup>2</sup>	75.00	176,434.50
13	Ramp Walls				
14	In situ concrete walls; assumed 250mm thick	67	m <sup>3</sup>	210.00	14,121.98
15	Reinforcement to walls; assumed 220kg/m3	15	tn	1,250.00	18,493.06
16	Formwork to walls; both sides, basic finish	538	m <sup>2</sup>	75.00	40,348.50
					<u>663,061.16</u>
Ground Floor Slab					
1	500mm thick ground floor slab to external landscaped areas				
2	In situ concrete to ground floor slab above basement to external landscaped areas/roads, 500mm thick as per WSL info	2,721	m <sup>3</sup>	200.00	544,250.00
3	Reinforcement to above, 220kg/m3 as per WSL info	599	tn	1,250.00	748,343.75
4	Formwork to soffit, basic finish	5,443	m <sup>2</sup>	70.00	380,975.00
5	Formwork to sides	392	m <sup>2</sup>	70.00	27,440.00
6	250mm thick ground floor slab to residential areas				
7	In situ concrete to ground floor slab to Block 7, 8, 10, 11 and 12 residential uses, 250mm thick as per WSL info	592	m <sup>3</sup>	200.00	118,383.75
8	Reinforcement to above, 260kg/m3 as per WSL info	154	tn	1,250.00	192,373.59
9	Formwork to soffit, basic finish	2,368	m <sup>2</sup>	70.00	165,737.25
10	300mm thick ground floor slab to retail areas				
11	In situ concrete to ground floor slab to Block 5, 6, 7, 8, 10, 11 and 12 retail uses, 300mm thick as per WSL info	868	m <sup>3</sup>	200.00	173,629.50
12	Reinforcement to above, 220kg/m3 as per WSL info	191	tn	1,250.00	238,740.56
13	Formwork to soffit, basic finish	2,894	m <sup>2</sup>	70.00	202,567.75
14	Steps to ground floor slab				
15	In situ concrete to steps in ground floor slab for changes in levels between residential and retail uses, assumed 1.5m high and 500mm thick	236	m <sup>3</sup>	200.00	47,110.80
16	Reinforcement to above, assumed 260kg/m3	61	tn	1,250.00	76,555.05
17	Formwork to steps in ground floor slab; both sides	943	m <sup>2</sup>	70.00	66,019.03
18	In situ concrete to steps in ground floor slab for changes in levels between residential use and landscaped podium, assumed 1.6m high and 500mm thick	273	m <sup>3</sup>	200.00	54,597.40

# Stag Brewery

## 2022 Scheme Planning Cost Estimate - East Basement (4Q 17 prices) - REDUCED EXTENT

### Phase B and C

Job No: 34196

No.	Description	Quantity	Unit	Rate £	Cost £
19	Reinforcement to above, assumed 260kg/m3	71	tn	1,250.00	88,720.78
20	Formwork to steps in ground floor slab; both sides	1,093	m <sup>2</sup>	70.00	76,500.27
21	In situ concrete to steps in ground floor slab for changes in levels between retail use and landscaped podium, assumed 0.95m high and 500mm thick	196	m <sup>3</sup>	200.00	39,259.00
22	Reinforcement to above, assumed 260kg/m3	51	tn	1,250.00	63,795.88
23	Formwork to steps in ground floor slab; both sides	784	m <sup>2</sup>	70.00	54,898.69
24	Transfer Beams				
25	In situ concrete to transfer beams; 1000mm deep x 500mm wide as advised by WSL	257	m <sup>3</sup>	210.00	53,876.13
26	Reinforcement to the above; 150kg/m3 as advised by WSL	38	tn	1,250.00	48,103.69
27	Formwork to transfer beams	1,283	m <sup>2</sup>	75.00	96,207.38
28	E.O. for beams / transfer structures yet to be detailed - scope TBC - assumed limited	1	Item	50,000.00	50,000.00
29	Basement Perimeter Detail - 2 (As advised by WSL)				
30	In situ concrete to transfer beam; assumed 1000mm deep x 500mm wide	9	m <sup>3</sup>	210.00	1,890.00
31	Reinforcement to the above; assumed 150kg/m3	1	tn	1,250.00	1,250.00
32	Formwork to transfer beams	47	m <sup>2</sup>	75.00	3,525.00
33	Basement Perimeter Detail - 3 (As advised by WSL)				
34	In situ concrete to transfer beam; assumed 600mm deep x 500mm wide	24	m <sup>3</sup>	210.00	5,040.00
35	Reinforcement to the above; assumed 150kg/m3	4	tn	1,250.00	5,000.00
36	Formwork to transfer beams	126	m <sup>2</sup>	75.00	9,450.00
37	Basement Perimeter Detail - 4 (As advised by WSL)				
38	In situ concrete to transfer beam; assumed 1000mm deep x 500mm wide	12	m <sup>3</sup>	210.00	2,520.00
39	Reinforcement to the above; assumed 150kg/m3	2	tn	1,250.00	2,500.00
40	Formwork to transfer beams	62	m <sup>2</sup>	75.00	4,650.00
41	Basement Perimeter Detail - 5 (As advised by WSL - Captured in Residential Substructure Costs)				
42	In situ concrete to transfer beam; assumed 600mm deep x 500mm wide		m <sup>3</sup>	210.00	
43	Reinforcement to the above; assumed 150kg/m3		tn	1,250.00	
44	Formwork to transfer beams		m <sup>2</sup>	75.00	
45	Tree Pits				
46	Allowance for forming tree pits within ground floor slab - Size and quantity to be confirmed	1	Item	150,000.00	150,000.00
47	Ramp				
48	In situ concrete to ramp, 350mm thick as advised by WSL	159	m <sup>3</sup>	210.00	33,442.50
49	Reinforcement to above, 215kg/m3 as advised by WSL	34	tn	1,250.00	42,798.44
50	Formwork to above	455	m <sup>2</sup>	75.00	34,125.00
51	Formwork to sides	25	m <sup>2</sup>	75.00	1,900.50
					<u>3,906,176.68</u>
	Internal Walls and Doors				
1	Internal Walls				
2	Internal blockwork walls to basement, assumed 140mm thick, 3.7m high	2,538	m <sup>2</sup>	110.00	279,202.00
3	Allowance for enhanced fire / acoustic requirements to plant areas e.g. energy centre - assumed 20% of total wall area	508	m <sup>2</sup>	100.00	50,764.00
4	Allowance for other walls yet to be reflected on plan -10%	254	m <sup>2</sup>	110.00	27,920.20
5	Internal Doors				
6	Allowance for single leaf internal doors to basement areas	23	nr	1,750.00	40,250.00
7	Allowance for double leaf internal doors to basement areas	39	nr	2,000.00	78,000.00
8	Allowance for riser doors to basement areas - assumed quantity	27	nr	800.00	21,600.00
9	E.O. allowance for fire / acoustic requirements to plant	36	nr	250.00	9,000.00

Stag Brewery  
 2022 Scheme Planning Cost Estimate - East Basement (4Q 17 prices) - REDUCED EXTENT  
 Phase B and C

Job No: 34196

No.	Description	Quantity	Unit	Rate £	Cost £
	rooms - assumed 40% of doors				<u>506,736.20</u>
	Internal Finishes and Fittings				
1	Wall Finishes				
2	Allowance for emulsion paint to internal blockwork walls	5,076	m <sup>2</sup>	15.00	76,146.00
3	Allowance for drylining and emulsion paint to concrete shear walls (one side only)	1,176	m <sup>2</sup>	65.00	76,454.95
4	Allowance for paint to concrete columns	1,694	m <sup>2</sup>	15.00	25,407.90
5	E.O. allowance for tanking to plant rooms etc	1	Item	35,000.00	35,000.00
6	E.O. for enhanced finishes to building cores	8	nr	5,000.00	40,000.00
7	Floor Finishes				
8	Allowance for screed to basement areas	10,704	m <sup>2</sup>	35.00	374,640.00
9	Allowance for floor finishes to basement areas, assumed epoxy paint generally	10,704	m <sup>2</sup>	25.00	267,600.00
10	E.O. allowance for tanking to plant rooms etc	1	Item	35,000.00	35,000.00
11	E.O. for enhanced finishes to building cores	8	nr	5,000.00	40,000.00
12	Allowance for white lining to car park /motorbike spaces and associated circulation zones etc	239	Spaces	150.00	35,850.00
13	Ceiling Finishes				
14	Allowance for ceiling finish to basement areas, assumed paint to concrete soffits generally	10,704	m <sup>2</sup>	10.00	107,040.00
15	E.O. for enhanced finishes to building cores	8	nr	5,000.00	40,000.00
16	Fixed Fittings				
17	Allowance for signage	10,704	m <sup>2</sup>	5.00	53,520.00
18	Allowance for residential bike racks, 2nr spaces per apartment	726	nr	150.00	108,900.00
19	Allowance for commercial bike racks, assumed 1nr bike rack per 1,000sq ft GIA	136	nr	150.00	20,400.00
20	Allowance for showers and WCs to commercial bike storage only, quantity as per S&P plan	8	nr	7,500.00	60,000.00
21	Allowance for lockers to commercial bike storage area only	136	nr	175.00	23,800.00
22	Allowance for other fixed fittings - scope TBC	10,704	m <sup>2</sup>	20.00	214,080.00
					<u>1,633,838.85</u>
	Mechanical and Electrical Installations				
1	MEP - Car Park				
2	Allowance for MEP installations to car parking areas	8,069	m <sup>2</sup>	125.00	1,008,625.00
3	MEP - Other Areas				
4	Allowance for MEP installations to other areas	2,635	m <sup>2</sup>	425.00	1,119,875.00
5	Allowance for car chargers - Say 20% of car parking spaces	48	nr	2,000.00	95,600.00
6	BWIC		%	3.00	66,723.00
					<u>2,290,823.00</u>

Notes

Costs updated in line with S&P Proposed Development Area 01 Basement Plan 18125\_C645\_Z1\_P\_B1\_001 Rev G as issued to G&T 22.07.22