

Date 13 December 2019 Job No/Ref L001

The Former Stag Brewery, Lower Richmond Road, London

Daylight/Sunlight Review

Addendum to Assessment Review

Following the initial review of the documentation submitted as part of planning application 18/0547/FUL for The Former Stag Brewery, Lower Richmond Road, the applicant provided responses to the comments as raised within the reviewer's original report (as found within this document).

- Applicants Response 1 received 2019-11-12: 2201-191112- eb7 Response to Arup comments.pdf
- Reviewers comments response issued 2019-11-20: 2019-11-20 Arup Response to eb7 responses.pdf
- Applicants Response 2 received 2019-12-02
- Reviewers email response dated 2019-12-03

Details of the applicant's response to comments and comments from the reviewer in turn can be found within Appendix A to C of this updated report.

The outcome of the Applicants response and provision of supporting information can be summarised as follows and supplements the summary as provided in the Executive Summary below:

Comments on Applicants Response 1

Generally the responses to comments we considered and acceptable. Though two comments were identified as requiring further supporting information:

- Point 4 Relating to statements made in relation to the impact of balconies on the available daylight within Butler House, Rann House and Churchill Court
- Point 7 Relating to the potential loss of daylight/sunlight availability within 2-6 Williams Lane.

See Appendix B for details.

Comments on Applicants Response 2

Point 4

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The reviewer is content that the Applicant's submission has provided evidence that the impact of the proposed development on the existing dwellings at Butler House, Rann House and Churchill Court is emphasised as a result of the balconies these properties have and the shadowing effect as a result. A number of these properties will see a noticeable reduction in access to natural light, however the reviewer is content with the Applicant's assessment as to their significance.

No further action required.

Point 7

From the evidence provided the reviewer does not necessarily agree with how the results/conclusion are presented. The daylight will be 'significantly' affected (as define with BR 209) for 6 of the 9 rooms assessed. For clarity these can be summarised as:

- One of the second floor windows to 2 Williams Lane will have a noticeable reduction (minor) in access to skylight, however the accompanying window in that room remains unaffected and the room NSL will not notably change.
- The first floor room facing the proposed site for all three properties will have a noticeable reduction (moderate) in access to skylight, with all three also having a notable loss of NSL (HouseNo.2 minor, no.4 major and no. 6 moderate).
- At ground floor for 2 and 6 Williams Lane; while the windows to the kitchen areas will see a noticeable (moderate) loss of access to skylight, these spaces have been demonstrated to be open plan with the main living spaces and will continue to receive natural light from the large patio doors on the rear elevation (away from the development).
- For 4 Williams Lane the ground floor living space will see a noticeable loss of access to natural light from that currently enjoyed (moderate/major significance with respect to daylight, major significance with respect to change in NSL). Though the reviewer would acknowledge the main Living/Kitchen/Dining space to the rear of the property would be unaffected.

Despite the comments raised above, from the evidence presented, the reviewer is content with the applicants assignment of significance as moderate adverse.

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Executive Summary

Arup have been commissioned to undertake an independent review of documents relating to Daylight/Sunlight submitted in support of planning application 18/0547/FUL for The Former Stag Brewery, Lower Richmond Road, Mortlake, London, SW14 7ET.

The methodology, assumptions and significant criteria have been reviewed for the two parts of the assessment:

- 1. Impact of the development on the surrounding properties:
- Generally, the methodology is in accordance with the guidance of BR 209 'Site layout planning for daylight and sunlight'.
- A number of queries have been raised in relation to assumptions or statements made, these generally relate to some uncertainly in what precisely has been presented. Clarification is required on a number of points to ensure agreement.
- Generally, the reviewer concurs with the assessment of impacts as a result of the proposed development on the availability of daylight. However, a number of properties are expected to experience a significant adverse reduction in access to daylight/sunlight and additional information/clarification is required before a view on the whole scheme could be considered:
 - o Rann House The reviewer is content with the applicant's assessment that the high reduction in light levels demonstrated are primarily influenced by the inbound balcony configuration.
 - O 31 Vineyard Path The reviewer would agree with the summary proposed by the applicant in that, despite 4 properties experiencing a reduction in the availability of natural light (one of which being of moderate significance), the level of daylight retained would not be atypical in a developed urban/suburban context.
 - 2 to 6 Williams Lane The reviewer does not agree with the significance attributed to the assessment of these properties. As single occupancy dwellings the evidence provided suggests the impact to these properties will be of major significance. Further evidence is required to support the applicant's statement or propose measures to mitigate the massing and impact on these properties.
 - Churchill Court Insufficient evidence has been provided to support the applicant's assessment that the balconies are the primary cause for the poor daylight performance. Further information is required in order to complete the review of the assessment.
 - Boat Race House (Addendum) While the reviewer generally agrees with information as presented, some points of clarification have been raised to ensure the reviewer has correctly understood the submission.

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- The reviewer concurs with the assessment in relation to availability/impact on sunlight availability.
- Broadly the reviewer agrees with the assessment in relation to availability of sunlight in amenity areas, with the exception that the following areas appear to have been omitted:
 - o Reid Court The amenity/grassed area associated with Reid Court has not been provided as part of the assessment. Further information required.
- 2. Availability of sunlight and daylight for future users:
- Generally, the methodology is in accordance with the guidance and expected process for the residential properties and amenity areas.
- The proposed use of daylight factors for assessment of the proposed school is not in accordance with the Department for Education's current Generic Design Brief. The reviewer therefore recommends advice/confirmation is sought from the DfE that they are content that the proposed massing and/or separation will not imping the school's ability to meet the GDB.
- With respect to the sunlight and daylight provision within the proposed development, the reviewer concurs that the level of amenity available to the future users is consummate which what would be expected and acceptable within this type of development.

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Introduction

Arup have been commissioned to undertake an independent review of documents relating to Daylight/Sunlight submitted in support of planning application 18/0547/FUL for The Former Stag Brewery, Lower Richmond Road, Mortlake, London, SW14 7ET.

The scope of this report is limited to the assessment on:

- The impact of the proposed development on the availability of daylight and sunlight to the existing properties and amenity areas surrounding the site. Before, during and following completion of the works.
- The availability of daylight and sunlight to the future users and residents of the site following the development of the site.

This report summarises the findings of the review, raising clarifications where the presented information is not clear and presents a summary of the reviewer's opinion of the assessment presented.

To facilitate the review, the following documents were supplied by Gerald Eve LLP and formed the basis of this assessment:

- Daylight, Sunlight, Overshadowing and Light Pollution EIA Report.pdf Parts 1 to 10 of 10
 Daylight, Sunlight, Overshadowing and Light Pollution EIA: February 2018
- Addendum ES Daylight Chapter.pdf extract of document of unknown title. Chapter Daylit, Sunlight, Over shadowing and Light Pollution
- 190503 Updated Internal Daylight Sunlight Report.pdf Internal Daylight & Sunlight Report: February 2018 (updated 29 April 2019)
- Supporting documents in the form of:
 - The proposed masterplan layouts
 - O General arrangements for the proposed floor plans for Buildings1 to 12, and 18 & 19.

Each of the main reports identified above have been assessed in turn; considering the methodology, assessment results and conclusions presented individually. A statement has been provided for each declaring whether Arup concurs with the findings of the report.

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Existing Properties – EIA Chapter 18 – Feb 2018

Methodology

Generally, the reviewer concurs with the methodology presented within the EIA document.

BRE document BR 209 'Site layout planning for daylight and sunlight' recommends a process for the assessment of daylight availability within existing buildings; as defined within Figure 20 of BR 209.

This process/methodology has not been strictly followed within the submitted EIA Chapter. The assessment includes properties that are beyond the three times the height of the development. While not detrimental to the outcome of the assessment itself, the information is superfluous and not helpful in interpretation as to the true impact of the development.

As acknowledged within the submission, BRE 209 does not advocate using ADF within the existing buildings, recommending that VSC is the appropriate parameter to use. As such ADF has not been considered as part of this review for existing properties.

Para 18.1 – Document states 'A standard 4.27 m deep room was assumed unless the building form dictated otherwise.'. Where has this standard depth been derived from? Clarification required to support assumption.

Para 18.2 - The chapter states that the assessment has been undertaken considering 'the maximum allowable spatial parameters sought for approval. This would give rise to the greatest massing and so can be considered to reflect a 'worst-case' assessment.' However, Drawing 2201-04 contained within the document appears to depict a very detailed 3D model not consistent with a maximum parameter submission. While Para 18.2 acknowledges that there would be likely very little difference between a 'minimum parameters' submission, confirmation is required that the assessment has been undertaken using the 3D model presented in drawings 2201-04. Clarification required.

Baseline Assessment

Para 18.58 and Table 18.2 – The selection of sensitive receptors to be assessed is not in accordance with BR 209 (3x proposed development height) and has encapsulated more buildings than necessary, leading to superfluous information and unnecessary assessment.

Table 18.3 – The number of receptors associated with some buildings does not concur with those presented within the 3D images. For example

- Reid Court has 88 declared windows which have been assessed in the baseline case for VSC in Table 18.3, but 64 have been assessed in baseline NSL in Table 18.3, however only 44 are been presented within the assessment images facing the proposed development.
- Churchill Court has 83 declared windows in Table 18.3, but only 65 on the presented image of the assessment model.

Clarification required as to where the additional receptors are located and why they are considered as part of the assessment. **Clarification required.**

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Para 18.62 – The narrative suggests that the low availability for VSC at a number of properties is due to the impact of overhanging/recessed balconies on the existing properties. This assumption has not been supported with evidence. BR 209 suggest that this be demonstrated by undertaking assessment with and without the balcony applied, allowing the impact of the balcony to be quantified. **Further information required.**

Completed Development

Para 18.76 – The states:

Properties with windows that do not have a direct line of sight to the Development or are at a significant distance from the Site have not been included within this assessment. In some cases where buildings are a significant distance from the Site, only windows which would see the greatest loss have been assessed to present a worst case. Should these windows see a minor adverse or insignificant effect it can be said that other windows within the building would see an effect that is the same or less.

This does not appear to be represented within the submitted assessment. For example:

- Lady Elizabeth house, properties on Watney Road and some properties along Lower Richmond Road have been included within the assessment, despite being considered a 'significant' distance away from the proposed development.
- It is not clear from the submitted information where all the sensitive receptors are on Churchill Court or Reid Court are located and whether they have direct line of sight to the proposed development.

Clarification required.

Para 18.85 - 31 Vineyard Path – Statement does not concur with evidence presented within Table 18.7. Three windows would experience minor adverse reductions, while one window would experience a moderate adverse reduction. This should be acknowledged within the summary **Clarification required.**

Para 18.92 – 2 to 6 Williams Lane - The application suggests the likely long-term effects on the property are moderate. However, review of the information and assessment results in Appendix 18.2 shows that whilst the property does currently enjoy a relatively open aspect for a suburban environment, the impacts on the ground floor will be noticeable and significant. The results show that these spaces, identified as living rooms, will see a loss of VSC marginally short of 40% (which would be classified as moderate) and a loss in NSL around and greater than 60% (classified as major). Therefore, the reviewer would classify the effects on these properties as **long-term**, **local and of major adverse** significance. If the existing development is considered to enjoy unusually high access to natural light, then alternative target criteria should be proposed using a 'mirror image' assessment or other justification. The applicant should provide clarification and justification for the significance level proposed within the submission. **Further information required to support assessment**.

Para 18.99 and 18.100 – Churchill Court. A number of rooms/windows demonstrate an exceedingly low availability of daylight light, with reduction daylight significant (major adverse) to a number of rooms. The reason for the significant reduction in VSC and NSL has been attributed to the presence of balconies on the building. No evidence has been provided supporting this statement. The

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applicant should undertake the assessment with and without the balconies to demonstrate their influence. There is insufficient information to adequately the assess the significance of the impact. **Further information required to support assessment.**

Para 18.112 – Jolly Gardeners. The application suggests the likely long-term effects on the property are moderate. The assessment states that 8 of the 18 windows would notice a change in available daylight; of which 3 would be minor, 2 would be moderate and 3 would be major. Considering the argument proposed by the applicant, the dual aspect nature of some of the spaces and the likely uses of the first and second floor rooms in the configuration presented; the reviewer concurs with the applicant's statement of significance.

Para 18.116 – Amenity Areas. Appendix 18.3 – Overshadowing (Sunlight Amenity) Analysis. The rear gardens/grassed areas associated with Reid Court have not been included within the assessment provided. There is insufficient information to adequately the assess the significance of the impact. **Further information required.**

Stated Conclusions

Para 18.138 – Generally the reviewer concurs with the statement, however the information submitted has not established the cause and significance of the effect as a result of the balconies on the existing buildings. Therefore, further information is required to support the statement. **Further information required.**

Para 18.139 – The concluding statement has suggested that the long-term impacts would be insignificant. While this is true of a large number of the proposed properties, two properties are considered to experience a more significant impact and therefore requires further investigation. Namely the impact on Churchill Court and 2-6 Williams Lane, where a number of windows/rooms are expected to see a major significant adverse impact on the availability of natural light to these buildings. While the applicant has suggested this is as a result of balconies/overhangs to the existing property, this has not been demonstrated. **Further information required.**

Existing Properties – Addendum ES Chapter – April 2019

Methodology

See comments associated with the Daylight, Sunlight, Overshadowing and Light Pollution EIA Report.pdf.

Baseline/Completed Development Assessment

Para 4.135 – It is unclear whether the results presented are for the true baseline context of the site, as current, or utilising a mirror image of Boat Race House. **Clarification required.**

Para 4.142 and Para 4.144 – Statement made relating to the use of a mirror image of the proposed development. The statement refers to an application of the mirror results applied against the 'targets', however it is unclear what targets are being applied in the context of Boat Race House. If the mirror image of Boat Race House has been used as the 'new' baseline against which the proposed development has been assessed, then the significance criteria as defined within the EIA

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would no longer stand true. As such, any reduction from the mirror image would constitute an adverse impact, with significance defined as 100-90% of baseline - Minor, 80-89.9% Moderate, 79.9% or less – Major Significance.

The reviewer would advocate the use of the 'mirror image' as part of the assessment, however the method in which the attribution of significance is unclear. **Clarification required.**

Stated Conclusion

Para 4.150 to 4.152 – The review concurs with the summary provided, and bar the awaiting clarifications as identified in the above sections would agree there is no need for the implementation of mitigating measures.

Future Users – Internal Daylight/Sunlight Report

Methodology

Generally, except for the school, the reviewer concurs with the methodology presented within the Internal Daylight & Sunlight Report, dated Feb 2018 (Updated 29 April 2019).

Para 2.4 – The methodology states that the Classrooms of the proposed school have been assessed against a target of 2% Daylight Factor (DF). The use of DF is not in line with the Department for Education's Generic Design Brief (GDB) for new schools. The DfE GDB generally requires assessment of the proposed school against a series of Climate Based Daylight Modelling (CBDM) metrics for each type of space. Confirmation is required that the DfE has been consulted in relation to the massing of the proposed development to the north and south of the school, and that are they content that sufficient space has been provided to enable the delivery of a school with adequate daylight provision. Clarification required.

Para 3.2 – While the use of a window transmittance of 0.68 is appropriate for residential properties, a value of this level would not be typical for use within commercial or education properties (DfE Funded schools). Such applications would require the use of solar control coatings, further reducing light transmission when appropriate maintenance factors are applied. Confirmation is required that the DfE are content that adequate access to daylight is provided to allow compliance with the DfE GDB. Clarification required.

Appendix 1 – the floor plans presented do not indicate whether the ADF calculations have been undertaken including the shading effects of the surrounding blocks. Please confirm whether the plans presented are an extract of the surrounding proposed development and existing context, or otherwise. **Clarification required**.

Internal Daylight and Sunlight Results

Para 6.1 – States that the lowest floors have been assessed. However, the results presented within Table 1 and Appendix 1 appear to present higher floors. Please clarify which floors have not been included within the assessment. **Clarification required**.

Para 6.11 – As described within comment raised against Para 2.4. The performance metric to be used in schools is not DF and therefore does not 'show good levels of amenity in line with the

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requirements for a school'. Confirmation required that the DfE are content that adequate access to daylight is provided to allow compliance with the DfE GDB. Clarification required.

Sunlight Availability within Private and Public Amenity Areas

The reviewer concurs with the assessment and findings as presented in relation to sunlight and overshadowing in public amenity areas.

Stated Conclusions

Para 7.3 – While no evidence has been presented to demonstrate that 'circa 89%' of rooms meet the BRE criteria. The reviewer is content with the evidence presented in para 6.5 is an accurate representation of the available daylight and in accordance with what could be considered reasonable provision for this type of development.

Assessment Conclusion

The methodology, assumptions and significant criteria have been reviewed for the two parts of the assessment:

- 1. Impact of the development on the surrounding properties:
- Generally, the methodology is in accordance with the guidance of BR 209 'Site layout planning for daylight and sunlight'.
- A number of queries have been raised in relation to assumptions or statements made, these generally relate to some uncertainly in what precisely has been presented. Clarification is required on a number of points to ensure agreement.
- Generally, the reviewer concurs with the assessment of impacts as a result of the proposed development on the availability of daylight. However, a number of properties are expected to experience a significant adverse reduction in access to daylight/sunlight and additional information/clarification is required before a view on the whole scheme could be considered:
 - Rann House The reviewer is content with the applicant's assessment that the high reduction in light levels demonstrated are primarily influenced by the inbound balcony configuration.
 - o 31 Vineyard Path The reviewer would agree with the summary proposed by the applicant in that, despite four properties experiencing a reduction in the availability of natural light (one of which being of moderate significance), the level of daylight retained would not be atypical in a developed of similar urban/suburban context.
 - 2 to 6 Williams Lane The reviewer does not agree with the significance attributed to the assessment of these properties. As single occupancy dwellings the evidence provided suggests the impact to these properties will be of major significance. Further evidence is required to support the applicant's statement or propose measure to mitigate the massing and impact on these properties.

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- Churchill Court Insufficient evidence has been provided to support the applicant's assessment that the balconies are the primary cause for the poor daylight performance. Further information is required in order to complete the review of the assessment.
- Boat Race House (Addendum) While the reviewer generally agrees with information as presented, some points of clarification have been raised to ensure the reviewer has correctly understood the submission.
- The reviewer concurs with the assessment in relation to availability/impact on sunlight availability.
- Broadly the reviewer agrees with the assessment in relation to availability of sunlight in amenity areas, with the exception that the following areas appear to have been omitted:
 - Reid Court The amenity/grassed area associated with Reid Court has not been provided as part of the assessment. Further information required.
- 2. Availability of sunlight and daylight for future users:
- Generally, the methodology is in accordance with the guidance and expected process for the residential properties and amenity areas.
- The proposed use of daylight factors for assessment of the proposed school is not in accordance with the Department for Educations current Generic Design Brief. The reviewer therefore recommends advice/confirmation is sought from the DfE that they are content that the proposed massing and/or separation will not impinge the school's ability to meet the GDB.
- With respect to the sunlight and daylight provision within the proposed development, the reviewer concurs that the level of amenity available to the future users is consummate which would be expected and acceptable within this type of development.

Appendix A

Applicant's Response 1



Eb7 Clarifications following Arup review

Clarification	Arup Clarification request	Eb7 Response
number		
EIA chapter F		
1	Para 18.1 – Document states 'A standard 4.27 m deep room was assumed unless the building form dictated otherwise.'. Where has this standard depth been derived from? Clarification required to support assumption.	This is a historic industry standard for residential accommodation where detailed information is not available (as is common for neighbouring properties). The reason it is not a round figure is that equates to 14 feet.
2	Para 18.2 - The chapter states that the assessment has been undertaken considering 'the maximum allowable spatial parameters sought for approval. This would give rise to the greatest massing and so can be considered to reflect a 'worst-case' assessment.' However, Drawing 2201-04 contained within the document appears to depict a very detailed 3D model not consistent with a maximum parameter submission. While Para 18.2 acknowledges that there would be likely very little difference between a 'minimum parameters' submission, confirmation is required that the assessment has been undertaken using the 3D model presented in drawings 2201-04. Clarification required.	The reviewer is correct in picking this up. The image showed both max parameters and detail. We have checked the maximum extents AODs provided to us by the architects against the model and the heights used in our analysis are correct. An updated plot has been provided of what was assessed (Appendix 1). There is still more detail than is usually shown on maximum extents model (parapets) but this is in line with the model sent to us by the architects and as mentioned is in line with the max extents heights.
3	Para 18.58 and Table 18.2 – The selection of sensitive receptors to be assessed is not in accordance with BR 209 (3x proposed development height) and has encapsulated more buildings than necessary, leading to superfluous information and unnecessary assessment. Table 18.3 – The number of receptors associated with some buildings does not concur with those presented within the 3D images. For example • Reid Court has 88 declared windows which have been assessed in the baseline case for VSC in Table 18.3, but 64 have been assessed in baseline NSL in Table 18.3, however only 44 are been presented within the assessment images facing the proposed development.	The window maps provided in the report do not show all of the windows assessed. We have now provided additional window maps showing the location of these windows (Appendix 2).



	· Churchill Court has 83 declared windows in Table 18.3, but only 65 on the presented image of the assessment model. Clarification required as to where the additional receptors are located and why they are	
	considered as part of the assessment. Clarification required.	
4	Para 18.62 – The narrative suggests that the low availability for VSC at a number of properties is due to the impact of overhanging/recessed balconies on the existing properties. This assumption has not been supported with evidence. BR 209 suggest that this be demonstrated by undertaking assessment with and without the balcony applied, allowing the impact of the balcony to be quantified. Further information required.	As an example of what is referred to in para 18.62 analysis has been run on Churchill Court with balconies removed. On the ground floor primary overhung windows W03, W09, W11, W13 and W18 increase their baseline VSC from 15.3, 17.1, 15.0, 16.4 and 12.4 to 29.8, 26.8, 29.5, 26.0 and 25.4 respectively with the overhangs removed. This proves that the balconies are making a significant difference to daylight levels currently received within these rooms. (appendix 3)
5	Para 18.76 – The states: Properties with windows that do not have a direct line of sight to the Development or are at a significant distance from the Site have not been included within this assessment. In some cases where buildings are a significant distance from the Site, only windows which would see the greatest loss have been assessed to present a worst case. Should these windows see a minor adverse or insignificant effect it can be said that other windows within the building would see an effect that is the same or less. This does not appear to be represented within the submitted assessment. For example: Lady Elizabeth house, properties on Watney Road and some properties along Lower Richmond Road have been included within the assessment, despite being considered a 'significant' distance away from the proposed development. It is not clear from the submitted information where all the sensitive receptors are on Churchill Court or Reid Court are located and whether they have direct line of sight to the proposed development. Clarification required.	We are not clear on why this point is relevant. The number and range of windows assessed is comprehensive as they were modelled before the scheme was fixed . We have provided further window maps for Churchill Court and Reid Court to show the location of the windows assessed for these properties. With this information the reader can ascertain which windows would be affected by the proposed development and which are not. (Appendix 2).



6	Para 18.85 - 31 Vineyard Path – Statement does not concur with evidence presented within Table 18.7. Three windows would experience minor adverse reductions, while one window would experience a moderate adverse reduction. This should be acknowledged within the summary. Clarification required.	Correct, this is a typo. This does not affect the overall significance applied to this receptor.
7	Para 18.92 – 2 to 6 Williams Lane - The application suggests the likely long-term effects on the property are moderate. However, review of the information and assessment results in Appendix 18.2 shows that whilst the property does currently enjoy a relatively open aspect for a suburban environment, the impacts on the ground floor will be noticeable and significant. The results show that these spaces, identified as living rooms, will see a loss of VSC marginally short of 40% (which would be classified as moderate) and a loss in NSL around and greater than 60% (classified as major). Therefore, the reviewer would classify the effects on these properties as long-term, local and of major adverse significance. If the existing development is considered to enjoy unusually high access to natural light, then alternative target criteria should be proposed using a 'mirror image' assessment or other justification. The applicant should provide clarification and justification for the significance level proposed within the submission. Further information required to support assessment.	We take the reviewers point on board for this property. During design stage there was a focus on reducing the VSC effect to the windows on the ground floor to show a reduction of less than 40% to reduce the effect of the proposal on this properties daylight. The single relatively small window serving these 3 rooms makes these spaces sensitive to alterations in NSL. As the maximum extent massing forms a more dense form of development we than currently exists at present along this road, we do not feel a mirroring assessment would benefit in describing this effect to this property as typical within an urban environment. The retained levels of VSC to these rooms being circa 20% are considered appropriate and in excess of the mirrored effects shown as a result of Boat Race House which sits in a different part of the site but within the same urban context. As such, although we acknowledge there are a small number of windows that do see effects that are major adverse by reference to NSC only (1 window within each dwelling), we are comfortable that the effect to the property as a whole can be considered Moderate Adverse .



8	Para 18.99 and 18.100 – Churchill Court. A number of rooms/windows demonstrate an exceedingly low availability of daylight light, with reduction daylight significant (major adverse) to a number of rooms. The reason for the significant reduction in VSC and NSL has been attributed to the presence of balconies on the building. No evidence has been provided supporting this statement. The applicant should undertake the assessment with and without the balconies to demonstrate their influence. There is insufficient information to adequately the assess the significance of the impact.	We have taken the suggestion on board and have run a balconies off assessment for Churchill court. The results show significant reductions in effect with rooms that were overhung generally seeing effects that would be considered minor adverse or less. (appendix 3)
	Further information required to support assessment.	
9	Para 18.116 – Amenity Areas. Appendix 18.3 – Overshadowing (Sunlight Amenity) Analysis. The rear gardens/grassed areas associated with Reid Court have not been included within the assessment provided. There is insufficient information to adequately the assess the significance of the impact. Further information required.	This was omitted in error. This has now been provided and this area sees no noticeable effect. (appendix 4).
10	Para 18.138 – Generally the reviewer concurs with the statement, however the information submitted has not established the cause and significance of the effect as a result of the balconies on the existing buildings. Therefore, further information is required to support the statement. Further information required.	Further information has been provided to prove this point on Churchill Court as this property was highlighted by the reviewer in the completed development section.
11	Para 18.139 – The concluding statement has suggested that the long-term impacts would be insignificant. While this is true of a large number of the proposed properties, two properties are considered to experience a more significant impact and therefore requires further investigation. Namely the impact on Churchill Court and 2-6 Williams Lane, where a number of windows/rooms are expected to see a major significant adverse impact on the availability of natural light to these buildings. While the applicant has suggested this is as a result of balconies/overhangs to the existing property, this has not been demonstrated. Further information required.	This point has been dealt with in earlier comments.
Addendu	m April 2019	
12	Para 4.135 – It is unclear whether the results presented are for the true baseline context of the site, as current, or utilising a mirror image of Boat Race House. Clarification required.	This is the existing baseline and not mirrored
	Para 4.142 and Para 4.144 – Statement made relating to the use of a mirror image of the proposed development. The statement refers to an application of the mirror results applied against the 'targets', however it is unclear what targets are being applied in the	Using the suggested targets for the mirrored baseline set out in the reviewers comments the effects on VSC to windows would be:



context of Boat Race House. If the mirror image of Boat Race House has been used as the 'new' baseline against which the

proposed development has been assessed, then the significance criteria as defined within the EIA would no longer stand true. As such, any reduction from the mirror image would constitute an adverse impact, with significance defined as 100-90% of baseline - Minor, 80-89.9% Moderate, 79.9% or less – Major Significance.

The reviewer would advocate the use of the 'mirror image' as part of the assessment, however the method in which the attribution of significance is unclear. **Clarification required.**

- 1 Minor Beneficial
- 5 Negligible
- 39 Minor Adverse
- 12 Moderate Adverse
- 2 Major Adverse

The effect on NSC to rooms would be:

- 1 Major Beneficial
- 1 Moderate Beneficial
- 1 Minor Beneficial
- 16 Negligible
- 6 Minor Adverse
- 2 Moderate Adverse
- 5 Major Adverse

All but one of the Living rooms are dual aspect and as such see at least one window with minor adverse effects or better in VSC. The remaining living room is single aspect and sees a moderate effect with regard to VSC and major effect with regard to NSC. The remaining rooms are bedrooms and as such have a lower requirement for light. The significance was previously applied as **Moderate** to **Major Adverse**. On the basis of these targets it may be suitable do downgrade that significance of effect based on the mirrored baseline to **Minor** to **Moderate Adverse**. We feel that this effect is acceptable and retained levels of light are in line with those in this context.

Future Users – Internal Daylight/Sunlight Report



13	Para 2.4 – The methodology states that the Classrooms of the proposed school have been assessed against a target of 2% Daylight Factor (DF). The use of DF is not in line with the Department for Education's Generic Design Brief (GDB) for new schools. The DfE GDB generally requires assessment of the proposed school against a series of Climate Based Daylight Modelling (CBDM) metrics for each type of space. Confirmation is required that the DfE has been consulted in relation to the massing of the proposed development to the north and south of the school, and that are they content that sufficient space has been provided to enable the delivery of a school with adequate daylight provision. Clarification required.	This document was not live at the time of submission and further to this, it is not a point relevant for planning. We feel there is sufficient daylight and sunlight potential to achieve the targets set out in the new guidance with reasonable distances between blocks and an unobstructed view to the south and the west. This point will be dealt with post planning at the detailed design stage. Further to this, a letter sent by the DoE on the 10 th of November confirms that that design contained in the planning application currently being considered for Mortlake Brewery has been approved by the Department of (appendix 5).
14	Para 3.2 – While the use of a window transmittance of 0.68 is appropriate for residential properties, a value of this level would not be typical for use within commercial or education properties (DfE Funded schools). Such applications would require the use of solar control coatings, further reducing light transmission when appropriate maintenance factors are applied. Confirmation is required that the DfE are content that adequate access to daylight is provided to allow compliance with the DfE GDB. Clarification required.	As described above, this will be dealt with at the detailed design stage.
15	Appendix 1 – the floor plans presented do not indicate whether the ADF calculations have been undertaken including the shading effects of the surrounding blocks. Please confirm whether the plans presented are an extract of the surrounding proposed development and existing context, or otherwise. Clarification required .	All surrounding proposed blocks (max extents) were included in this assessment.
16	Para 6.1 – States that the lowest floors have been assessed. However, the results presented within Table 1 and Appendix 1 appear to present higher floors. Please clarify which floors have not been included within the assessment. Clarification required .	The assessments considered the ground floor (where residential) and typical floors above. This ranged from 2 nd to 4 th floors. The floors above this were not assessed as it was considered the ground and typical provided a sufficient sample.



17	Para 6.11 – As described within comment raised against Para 2.4. The performance	The daylight potential within the school is
	metric to be used in schools is not DF and therefore does not 'show good levels of	considered to be good and as such there is scope
	amenity in line with the requirements for a school'. Confirmation required that the DfE	to achieve the targets in the DfE GDB.
	are content that adequate access to daylight is provided to allow compliance with the	-
	DfE GDB. Clarification required.	

Appendix B

Reviewer's Response 1

Arup Comments Dan Lister 20/11/2019



Eb7 Clarifications following Arup review

Clarification	Arup Clarification request	Eb7 Response
number		
EIA chapter F	eb 2018	
1	Para 18.1 – Document states 'A standard 4.27 m deep room was assumed unless the building form dictated otherwise.'. Where has this standard depth been derived from? Clarification required to support assumption.	Noted and acceptable - No action required al not
_		tnat equates to 14 reet.
2	Para 18.2 - The chapter states that the assessment has been undertaken considering 'the maximum allowable spatial parameters sought for approval. This would give rise to the greatest massing and so can be considered to reflect a 'worst-case' assessment.' However, Drawing 2201-04 contained within the document appears to depict a very detailed 3D model not consistent with a maximum parameter submission. While Para 18.2 acknowledges that there would be likely very little difference between a 'minimum parameters' submission, confirmation is required that the assessment has been undertaken using the 3D model presented in drawings 2201-04. Clarification required.	An updated plot has been provided of what was assessed (Appendix 1). There is still more detail than is usually shown on maximum extents model (parapets) but this is in line with the model sent to us by the architects and as mentioned is in line with the max extents heights.
3	Para 18.58 and Table 18.2 – The selection of sensitive receptors to be assessed is not in accordance with BR 209 (3x proposed development height) and has encapsulated more buildings than necessary, leading to superfluous information and unnecessary assessment. Table 18.3 – The number of receptors associated with some buildings does not concur with those presented within the 3D images. For example • Reid Court has 88 declared windows which have been assessed in the baseline case for VSC in Table 18.3, but 64 have been assessed in baseline NSL in Table 18.3, however only 44 are been presented within the assessment images facing the proposed development.	The window maps provided in the report do not show all of the windows assessed. We have now provided additional window maps showing the location of these windows (Appendix 2). Noted and understood - No action required for this comment. See response to comment 5.



	 Churchill Court has 83 declared windows in Table 18.3, but only 65 on the presented image of the assessment model. Clarification required as to where the additional receptors are located and why they are considered as part of the assessment. Clarification required. 	
4	Para 18.62 – The narrative suggests that the low availability for VSC at a number of properties is due to the impact of overhanging/recessed balconies on the existing properties. This assumption has not been supported with evidence. BR 209 suggest that this be demonstrated by undertaking assessment with and without the balcony applied, allowing the impact of the balcony to be quantified. Further information required.	Partial response. The comment relates to: - Butler House - Rann House - Churchill Court . Assessment has been provided for Churchill Court only. Assessment required for all properties mentioned within paragraph 18.62 to address comment
5	Para 18.76 – The states: Properties with windows that do not have a direct line of sight to the Development or are at a significant distance from the Site have not been included within this assessment. In some cases where buildings are a significant distance from the Site, only windows which would see the greatest loss have been assessed to present a worst case. Should these windows see a minor adverse or insignificant effect it can be said that other windows within the building would see an effect that is the same or less. This does not appear to be represented within the submitted assessment. For example: Lady Elizabeth house, properties on Watney Road and some properties along Lower Richmond Road have been included within the assessment, despite being considered a 'significant' distance away from the proposed development. It is not clear from the submitted information where all the sensitive receptors are on Churchill Court or Reid Court are located and whether they have direct line of sight to the proposed development. Clarification required.	We are not clear on why this point is relevant. The number and range of windows assessed is comprehensive as they were modelled before the scheme was fixed. We have provided further window maps for Churchill Court and Reid Court to show the location of the windows assessed for these properties. With this information the reader can ascertain which windows would be affected by The comment has been raised as to the unknown location/position of receptors within the assessment. Acknowledging the applicants response to item 3; it appears Churchill Court's assessment incorporates windows that do not face onto the proposed development, though the reviewer notes that these may have been included to understand the mitigated effect on the potentially affected side windows. No action required



6	Para 18.85 - 31 Vineyard Path – Statement does not concur with evidence presented within Table 18.7. Three windows would experience minor adverse reductions, while one window would experience a moderate adverse reduction. This should be acknowledged within the summary. Clarification required.	Noted and acceptable - No action required
7	Para 18.92 – 2 to 6 Williams Lane - The application suggests the likely long-term effects on the property are moderate. However, review of the information and assessment results in Appendix 18.2 shows that whilst the property does currently enjoy a relatively open aspect for a suburban environment, the impacts on the ground floor will be	The reviewer does not concur with the assessment and further information/justification/demonstration is required to justify this assessment. It is not clear how/why an alternative target criteria of VSC of approx. 20% is deemed acceptable. While these may only affect a low number of rooms, the rooms impacted are amongst the most important within a single dwelling building and therefore significance will be high. . If the applicant is proposing alternative target VSC criteria be considered as part of the assessment then the alternative assessment criteria should be justified as part of the submission. In order to propose alternative target the applicant should refer to guidance within BR209. An acceptable measure for apply alternative criteria are to assess the existing development against a mirror of itself; as applied to the Boat Race House. However the applicant appears to discounted this approach. An alternative approach would be to propose an alternative target and justify as being suitable for adoption within the context of Williams Street. This could be achieved through analysis of an appropriate existing context where the massing and environment is considered to be comparable to that of William Street and that the achieved VSC is commensurate to the proposed target value. Further information required to support the assessment. small number of windows that do see effects that are major adverse by reference to NSC only (1 window within each dwelling), we are comfortable
		that the effect to the property as a whole can be considered Moderate Adverse .



8	Para 18.99 and 18.100 – Churchill Court. A number of rooms/windows demonstrate an exceedingly low availability of daylight light, with reduction daylight significant (major adverse) to a number of rooms. The reason for the significant reduction in VSC and NSL has been attributed to the presence of balconies on the building. No evidence has been provided supporting this statement. The applicant should undertake the assessment with and without the balconies to demonstrate their influence. There is insufficient information to adequately the assess the significance of the impact. Further information required to support assessment.	We have taken the suggestion on board and have run a balconies off assessment for Churchill court. The results show significant reductions in effect with rooms that were overhung generally seeing effects that would be considered minor adverse or les Noted and acceptable - No action required
9	Para 18.116 – Amenity Areas. Appendix 18.3 – Overshadowing (Sunlight Amenity) Analysis. The rear gardens/grassed areas associated with Reid Court have not been included within the assessment provided. There is insufficient information to adequately the assess the significance of the impact. Further information required.	Noted and acceptable - No action required (
10	Para 18.138 – Generally the reviewer concurs with the statement, however the information submitted has not established the cause and significance of the effect as a result of the balconies on the existing buildings. Therefore, further information is required to support the statement. Further information required.	Further information has been provided to prove this point on Churchill Court as this proporty was hig dev
11	Para 18.139 – The concluding statement has suggested that the long-term impacts would be insignificant. While this is true of a large number of the proposed properties, two properties are considered to experience a more significant impact and therefore requires further investigation. Namely the impact on Churchill Court and 2-6 Williams Lane, where a number of windows/rooms are expected to see a major significant adverse impact on the availability of natural light to these buildings. While the applicant has suggested this is as a result of balconies/overhangs to the existing property, this has not been demonstrated. Further information required.	This point has been dealt with in earlier comments. Noted and acceptable - No action required
Addendum	n April 2019	
12	Para 4.135 – It is unclear whether the results presented are for the true baseline context of the site, as current, or utilising a mirror image of Boat Race House. Clarification required.	Noted and acceptable - No action required
	Para 4.142 and Para 4.144 – Statement made relating to the use of a mirror image of the proposed development. The statement refers to an application of the mirror results applied against the 'targets', however it is unclear what targets are being applied in the	Using the suggested targets for the mirrored baseline set out in the reviewers comments the effects on VSC to windows would be:



context of Boat Race House. If the mirror image of Boat Race House has been used as the 'new' baseline against which the

proposed development has been assessed, then the significance criteria as defined within the EIA would no longer stand true. As such, any reduction from the mirror image would constitute an adverse impact, with significance defined as 100-90% of baseline - Minor, 80-89.9% Moderate, 79.9% or less – Major Significance.

The reviewer would advocate the use of the 'mirror image' as part of the assessment, however the method in which the attribution of significance is unclear. **Clarification required.**

Noted. The reviewer concurs with the assessment that while there will be some windows that will experience a Moderate/Major adverse loss of natural light. Many of these spaces have access to light from an unaffected No action required

- 1 Major Beneficial
- 1 Moderate Beneficial
- 1 Minor Beneficial
- 16 Negligible
- 6 Minor Adverse
- 2 Moderate Adverse
- 5 Major Adverse

All but one of the Living rooms are dual aspect and as such see at least one window with minor adverse effects or better in VSC. The remaining living room is single aspect and sees a moderate effect with regard to VSC and major effect with regard to NSC. The remaining rooms are bedrooms and as such have a lower requirement for light. The significance was previously applied as **Moderate** to **Major Adverse**. On the basis of these targets it may be suitable do downgrade that significance of effect based on the mirrored baseline to **Minor** to **Moderate Adverse**. We feel that this effect is acceptable and retained levels of light are in line with those in this context.

Future Users – Internal Daylight/Sunlight Report



13	Para 2.4 – The methodology states that the Classrooms of the proposed school have been assessed against a target of 2% Daylight Factor (DF). The use of DF is not in line with the Department for Education's Generic Design Brief (GDB) for new schools. The DfE GDB generally requires assessment of the proposed school against a series of Climate Based Daylight Modelling (CBDM) metrics for each type of space. Confirmation is required that the DfE has been consulted in relation to the massing of the proposed development to the north and south of the school, and that are they content that sufficient space has been provided to enable the delivery of a school with adequate daylight provision. Clarification required.	The reviewer should have clarified that when refereeing to the DfE's GDB, this also would also reference the previous incarnations of the DfE as EFA or ESFA and their appropriate Facilities Output Specification. The requirement for CBDM (not daylight factor) has not changed in the last 6 years.
		Further to this, a letter sent by the DoE on the 10 th of November confirms that that design contained in the planning application currently being considered for Mortlake Brewery has been approved by the Department of (appendix 5).
14	Para 3.2 – While the use of a window transmittance of 0.68 is appropriate for residential properties, a value of this level would not be typical for use within commercial or education properties (DfE Funded schools). Such applications would require the use of solar control coatings, further reducing light transmission when appropriate maintenance factors are applied. Confirmation is required that the DfE are content that adequate access to daylight is provided to allow compliance with the DfE GDB. Clarification required.	As described above, this will be dealt with at the Noted - No action required for this comment. See response to comment 13.
15	Appendix 1 – the floor plans presented do not indicate whether the ADF calculations have been undertaken including the shading effects of the surrounding blocks. Please confirm whether the plans presented are an extract of the surrounding proposed development and existing context, or otherwise. Clarification required .	Noted and acceptable - No action required
16	Para 6.1 – States that the lowest floors have been assessed. However, the results presented within Table 1 and Appendix 1 appear to present higher floors. Please clarify which floors have not been included within the assessment. Clarification required .	The assessments considered the ground floor Noted and acceptable - No action required this und and typical provided a sufficient sample.



17	Para 6.11 – As described within comment raised against Para 2.4. The performance metric to be used in schools is not DF and therefore does not 'show good levels of amenity in line with the requirements for a school'. Confirmation required that the DfE are content that adequate access to daylight is provided to allow compliance with the DfE GDB. Clarification required.	The chall also accorded within the calculation of the comment. Noted - No action required for this comment. See response to comment 13.
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Appendix C Applicant's

Response 2

C1 Applicant's Response to Residual Comments

Clarification	Arup Clarification Request	Applicants Response
Number		
(Summary)	(20/11/2019)	(25/11/2019)
4	Partial response.	A copy of a balconies off assessment for Butler House and Rann House has been
(Balconies)	The comment relates to:	conducted. For ease, the window maps for these properties have been reattached to
	- Butler House	this response.
	- Rann House	
	- Churchill Court	As per the attached, for both Butler House and Rann House, the results show
		significant increase in the retained daylight levels.
	Assessment has been provided for	
	Churchill Court only. Assessment	The results also show that where the results show deviations from the suggested
	required for all properties	targets, the rooms are lit by multiple windows, with at least one window seeing no
	mentioned within paragraph 18.62	noticeable change in VSC levels. In addition, the results of the NSC analysis have
	to address comment.	shown NSC levels in line with the BRE targets.
		These results demonstrate the self-limiting nature of the balconies driving the
		impacts.

(Property at 2 to 6 Williams Lane)

The reviewer does not concur with the assessment and further information/justification/demonstration is required to justify this assessment. It is not clear how/why an alternative target criteria of VSC of approx. 20% is deemed acceptable. While these may only affect a low number of rooms, the rooms impacted are amongst the most important within a single dwelling building and therefore significance will be high.

If the applicant is proposing alternative target VSC criteria be considered as part of the assessment then the alternative assessment criteria should be justified as part of the submission.

In order to propose alternative target the applicant should refer to guidance within BR209. An acceptable measure for apply alternative criteria are to assess the existing development against a mirror of itself; as applied to the Boat Race House. However the applicant appears to discounted this approach.

An alternative approach would be to propose an alternative target and

Further investigations in regard to the layouts for 2-6 Williams have been undertaken and generally, the primary living spaces are situated within the rear elevation, unaffected by the proposed development.

The original planning application reference no is 09/1490/FUL. At ground floor, the original design of these buildings for 2 and 6 show a large dual aspect room with the kitchen area directly facing the site, with the living room to the rear, adjacent to the garden served by large glazed doors (See attached). We note that a planning application for 4 Williams Lane (planning reference no. 16/0184/FUL) was further submitted and the layouts show a small living / music room facing the site, with a large kitchen / Living / dining space fronting the garden. Upon review, it the large kitchen / Living/ dining space is likely to be the main living area.

With regard to the first and second floor, these areas appear to bedrooms. These rooms have also been updated in our model.

A copy of these floorplans described above have also been attached for your reference.

When applying significance, a judgement is made and room use when known can be considered. The floor plans obtained show the primary living areas at the rear which would not be affected by the proposed development as they do not face it. In respect of 2 and 6 Williams Lane, we have undertaken further analysis considering the dual aspect room. The results are attached and show no noticeable change in daylight levels to the primary windows serving these rooms, together with no noticeable change in NSC levels.

With regard to the rooms at first and second floor, we have applied these layouts. The results of the VSC assessment show broadly the same VSC levels. However as the rooms as smaller than those assumed, the results NSC assessment see an improvement, with 6 of the 9 rooms assessed experiencing no noticeable change in NSC levels. Of the remaining rooms, 1 would see minor adverse effects, 1 would see moderate adverse and 1 would see major adverse effects. These results are an improvement from the previously submitted results based on assumed room layouts.

justify as being suitable for adoption within the context of Williams Street. This could be achieved through analysis of an appropriate existing context where the massing and environment is considered to be comparable to that of William Street and that the achieved VSC is commensurate to the proposed target value.

Given the room use, coupled with the high amenity levels to the living spaces, we feel the significance of moderate adverse to these properties remains appropriate.

Further information required to support the assessment.

Project Title Report Title

Appendix D

Reviewer's Response 2

From:

Sent: 03 December 2019 14:22

To:

Subject: RE: [External] RE: Stag Brewery Site - Daylight Sunlight comments [Filed 03 Dec 2019 14:21]

Point 4

I'm content that the applicants submission has provided evidence that the impact of the proposed development on the existing dwellings at Butler House, Rann House and Churchill Court are emphasised as a result of the balconies these properties have and the shadowing effect as a result. A number of these properties will see a noticeable reduction in access to natural light, however I am content with the applicants assessment as to their significance. No further action required.

Point 7

From the evidence provided the reviewer does not necessarily agree with how the results/conclusion are presented. The daylight will be 'significantly' affected (as define with BR 209) for 6 of the 9 rooms assessed. For clarity these can be summarised as:

- One of the second floor windows to 2 Williams Lane will have a noticeable reduction (minor) in access to skylight, however the accompanying window in that room remains unaffected and the room NSL will not notably change.
- The first floor room facing the proposed site for all three properties will have a noticeable reduction (moderate) in access to skylight, with all three also having a notable loss of NSL (HouseNo.2 minor, no.4 major and no. 6 moderate).
- At ground floor for 2 and 6 Williams Lane; while the windows to the kitchen areas will see a noticeable (moderate) loss of access to skylight, these spaces have been demonstrated to be open plan with the main living spaces and will continue to receive natural light from the large patio doors on the rear elevation (away from the development).
- For 4 Williams Lane the ground floor living space will see a noticeable loss of access to natural light from that currently enjoyed (moderate/major significance with respect to daylight, major significance with respect to change in NSL). Though the reviewer would acknowledge the main Living/Kitchen/Dining space to the rear of the property would be unaffected.

Despite my comments above, from the evidence presented we are now content with the applicants assignment of significance as moderate adverse.

What is the	best way to	wrap this u	ip now?
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Kind regards

Dan