

8 Daylight, Sunlight, Overshadowing, Solar Glare and Light Pollution

8.1 Scope of Assessment

- 8.1.1 This chapter sets out the implications of the confirmed massing and details outlined within the proposed RMA for Plot 1 of the proposed Bishopsgate Goodsyrd masterplan, for the findings of the Daylight, Sunlight, Overshadowing, Solar Glare and Light Pollution Chapter as set out in the 2019 ESA.
- 8.1.2 The daylight, sunlight, overshadowing, solar glare and light pollution assessments and conclusions as reported in the 2019 ESA have been considered in respect of the development proposed within Plot 1.
- 8.1.3 In addition, the cumulative effects have been considered, taking into account any new scheme since approval.
- 8.1.4 Given the proposed Plot 1 is of commercial use, internal daylight and sunlight amenity is not a relevant consideration and is therefore not included in the scope of this Chapter.

8.2 Changes to Legislation, Policy and Guidance since the 2019 ESA

- 8.2.1 There have been updates to national, regional and local planning policy since the 2019 ESA, which are listed below:
- The National Planning Policy Framework (2021)
 - The London Plan (2021)
 - The London Borough of Tower Hamlets Local Plan 2031 (2020)
 - The London Borough of Hackney Local Plan 2033 (2020)
 - The National Planning Practice Guidance (2021)
- 8.2.2 However, these do not have any bearing on the technical assessments previously considered.
- 8.2.3 The new BRE Guidelines were published in June 2022. In respect of daylight, sunlight, overshadowing, solar glare and light pollution impacts to surrounding receptors assessments, there are no meaningful changes to the methods and criteria of these environmental topics.

8.3 Changes to Baseline Conditions

8.3.1 Owing to the location of Plot 1 within the wider Bishopsgate Goods yard masterplan site, there are no changes to the baseline conditions relevant to daylight, sunlight, overshadowing, solar glare and light pollution since the 2019 ESA.

8.4 Implications to Effects Reported in 2019 ESA

8.4.1 The 2019 ESA tested the daylight, sunlight, overshadowing, solar glare and light pollution effects of the Revised Bishopsgate Goodsyrd Masterplan.

Daylight, Sunlight and Overshadowing

8.4.2 In terms of daylight, sunlight and overshadowing, the proposed Plot 1 massing has been reviewed. Three areas would exceed the maximum parameters, as set out in the Statement of Conformity for the recently submitted Non-Material Amendment Application:

- North east lobby extension;
- Elements around station and Railway structure; and
- Alignment of the plinth with the upper levels.

8.4.3 However, these are massing adjustments which would be unlikely to noticeably alter the daylight, sunlight and overshadowing effects compared to those reported. This is due to both the location of the changes, which are not visible from neighbouring properties and/or the minimal nature of the changes, which would not have any material bearing upon daylight and sunlight. The massing would be overall very similar to that assessed in the 2019 ESA, as confirmed in the NMA Application. Therefore, no additional or new effects would occur, and the daylight, sunlight and overshadowing assessments of the 2019 ESA remain applicable.

Solar Glare

8.4.4 The 2019 ESA tested the potential for solar glare upon the façade of the proposed Plot 2 development. However, the façade details for Plot 1 were not known at the time so an assessment of any potential effects could not be undertaken.

8.4.5 Therefore, the proposed Plot 1 solar glare effects upon sensitive viewpoints have not yet been reported.

8.4.6 In respect of the potential for solar glare effects arising from the proposed Plot 1, a qualitative assessment has been undertaken.

- 8.4.7 In order to undertake the qualitative assessment, firstly, the potentially sensitive rail and road locations have been identified. Secondly, the façade details have been reviewed for those viewpoints from which Plot 1 would be potentially visible. Finally, professional judgement has been applied in consideration of the potential solar glare effects at sensitive rail and road viewpoints relating to the façades of the proposed Plot 1.
- 8.4.8 Sensitive receptors include:
- Rail viewpoints along the London Overground (eastbound and westbound);
 - Road viewpoints looking at traffic signals along Shoreditch High Street (northbound / southbound);
 - Road viewpoints looking at traffic signals along Bethnal Green Road (eastbound / westbound).
- 8.4.9 For the London Overground approaches travelling eastbound / westbound towards Plot 1, the façade comprises glazed elements, which are visible and may give rise to reflections. These reflections would be potentially visible in the early mornings and late evenings. However, the Plot 1 façade is broken up by solid elements, meaning that the full solar disc would not be fully reflected on any glazed elements. Therefore, it is likely that only small reflections would be visible for a limited period.
- 8.4.10 Train drivers travelling eastbound would likely only have a partial view of the Plot 1 development as they approach the station, due to existing buildings shielding the view further along the track. It is also likely that they would be travelling at a reduced speed as they approach Shoreditch High Street Station.
- 8.4.11 Any solar glare effects from the Plot 1 to train drivers travelling westbound would be temporary, as it is intended that Plots 2, 4, 5, 6, 7 and 10 to be built out ahead of Plot 1. Once built out, these Plots would mostly shield Plot 1, and potential reflections arising from Plot 1, from view for westbound train drivers.
- 8.4.12 Road user travelling eastbound / westbound along Bethnal Green Road and northbound / southbound along Shoreditch High Street would potentially have peripheral views of the Plot 1 and predominantly have a view of the lower portions of the building. The plinth comprises predominantly brickwork and any reflections from windows are unlikely to result in significant glare effects.
- 8.4.13 In particular, the lower portion of the northern elevation, which would be visible from Bethnal Green Road are unlikely to result in significant reflections. Additionally, road users travelling along Bethnal Green Road and south along Shoreditch High Street would sight of have multiple traffic signals, and so should any reflections occur, a road user could most likely defer to another signal, should glare become an issue. Views of Plot 1 for northbound road users along Shoreditch High Street would be partially blocked by the train bridge.

Furthermore, for any road users, when deploying the visor, would be able to shield most reflections above 5°.

- 8.4.14 Overall, there is potential for new solar glare effects beyond those reported in the 2019 ESA. These would potentially occur from viewpoints along the London Overground, Shoreditch High Street and Bethnal Green Road.
- 8.4.15 The London Overground rail viewpoint effects may result in to significant effects in the morning or evening. Any reflections to road viewpoints would most likely result in non-significant effects. However, whilst there is the potential instances of significant effects, it is likely that effects could be mitigated for the following reasons:
- Reflections would occur for a short period of time, due to the broken up nature of the glazed elements, meaning the full solar disc would not be reflected
 - Road users looking at a particular traffic signal which may be affected by glare mostly have sight of another traffic signal which is unaffected by glare
 - Deploying a visor would shield most reflections above 5° of a road users' line of sight.
 - Reflections occurring on the eastern façade would be temporary, as it is intended that Plots 2, 4, 5, 6, 7 and 10 to be built out ahead of Plot 1, which would shield potential reflections on the eastern and southern façade from view.

Light Pollution

- 8.4.16 The 2019 ESA tested the potential for light pollution from the proposed Plot 2 development. However, the design of Plot 1 was not known and so a qualitative assessment could not be undertaken.
- 8.4.17 Therefore, the proposed Plot 1 light pollution effects upon sensitive receptors have not yet been reported.
- 8.4.18 In respect of the potential for light pollution effects arising from the proposed Plot 1, no technical assessments have been undertaken. The assessments are therefore qualitative.
- 8.4.19 In undertaken the qualitative assessment, firstly the location of sensitive receptors to light pollution have been identified. Secondly, professional judgement has been applied in consideration of the potential light pollution effects at sensitive light pollution receptors relating to the proposed Plot 1.
- 8.4.20 Sensitive light pollution receptors include residential properties at:
- 194, 195 and 196 Shoreditch High Street;

- 2-10 (evens) Huntingdon Estate; and
- Future Bishopsgate Goods Yard Plots.

8.4.21 The proposed Plot 1 does not comprise highly glazed façade or office uses, which are most likely to result in significant light pollution effects. The lighting strategy has not yet been confirmed, however, it is understood that the proposed Plot 1 would not comprise high powered external lighting.

8.4.22 The 2019 ESA reports that effects up to moderate adverse significance could occur from the proposed Plot 2. It is unlikely that effects greater than this would occur from Plot 1. Any effects which occur would be to new receptors not previously assessed. Given the relative distance of receptors to the Site, it is unlikely that significant light pollution effects would occur. Should any high powered artificial lighting strategy be proposed, the following mitigation measures would reduce the effects to negligible and not significant:

- Providing a detailed lighting design designed to minimise the illuminance levels;
- The dimming of lights at the perimeter of the floor plan post-curfew; and
- Automatic blinds post-curfew.

8.4.23 Therefore, based on professional judgement, whilst the effects to the new receptors identified are likely to be not significant in most instances, the mitigation measures listed above would reduce any significant effects if implemented.

8.5 Consideration of any new Cumulative Schemes

8.5.1 It is noted that Huntingdon Industrial Estate, situated to the north east of Plot 1 has been consented. This building was qualitatively assessed in the cumulative scenario in the 2019 ESA. Therefore, no new additional cumulative effects are likely beyond those reported in the 2019 ESA.

8.6 Summary and Conclusion

8.6.1 No additional daylight, sunlight and overshadowing effects are likely beyond those report in the 2019 ESA.

8.6.2 There is potential for solar glare effects to new receptors which would have a view of Plot 1, including viewpoints along the London Overground and road viewpoints along Shoreditch High Street and Bethnal Green. The effects to the road viewpoints are likely to be non-significant, with potential instances of significant glare effects.

- 8.6.3 The westbound London Overground rail approach effects would occur in the evening and be likely to ranging from non-significant to significant. The eastbound London Overground rail approach effects would range from non-significant to significant. Once the remainder of the Masterplan is built out, portions of the eastern and southern façades of Plot 1 may be shielded from view, meaning that those reflections would likely be blocked from view.
- 8.6.4 In terms of light pollution, there is potential for effects to new receptors ranging from insignificant to significant but are not likely to be worse than those reported in the 2019 ESA.
- 8.6.5 There would be no change to the cumulative effects reported in the 2019 ESA.