

Project North Stand Manchester

Daylight and sunlight assessment

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Contents

1 Executive summary 5

2 Introduction 6

3 Methodology 7

 3.1.1 Direct sunlight on amenity spaces 7

 3.1.2 Identification of assessment locations 7

 3.1.3 Impact of the proposed development on its surroundings 8

4 Assessment results 9

 4.1.1 Direct sunlight on amenity spaces 9

 4.2 Cumulative impact of proposed and future developments 10

Table of Figures

Figure 3—1 Site and assessment locations Error! Bookmark not defined.

Figure 4—1 Shadow plots on the March equinox 10

Glossary

Term	Definition
BRE	Formerly the Building Research Establishment, renamed 'BRE' following privatisation
MCFC	Manchester City Football Club

1 Executive summary

- 1.1 This report sets out the results of an assessment of the impact of proposed alterations to the Etihad Stadium on sunlight exposure on amenity spaces within the proposed site boundary. The proposed alterations will increase the capacity of the North Stand and create two new buildings, one to be a hotel, and the other a workspace with a football museum, enhanced City Shop and a covered fan zone area referred to as City Square. The formal description of the proposed development and further detail on the proposals can be found in the planning statement and planning application form, both of which accompany the planning application. This report has been prepared in support of the planning application for the Proposed Development.
- 1.2 The EIA Scoping report on daylight, sunlight and overshadowing concluded that, "BR209 guidance for acceptable loss of daylight and sunlight at existing properties will be fully met" at all sensitive receptors adjacent to the Site and "It is proposed that a daylight, sunlight and overshadowing assessment is scoped out of the ES and is instead provided as a standalone report for the planning application, assessing only sunlight access on amenity spaces provided by the landscaping design within the Proposed Development."
- 1.3 The conclusions of this assessment, covering only sunlight access on amenity spaces provided by the landscaping design within the Proposed Development, are:
- The impact of the Proposed Development on City Square is minor adverse;
 - The impact of the Proposed Development on landscaped areas adjacent to the hotel entrance and access road is negligible; and
 - The cumulative impact of the proposed and future developments on the assessed open spaces is negligible.

2 Introduction

- 2.1 This report sets out the results of an assessment of the potential impact of the proposed North Stand Project on sunlight availability, and on open amenity spaces within the site boundary. The methodology adopted for the assessment is in accordance with that detailed in the BRE report BR209, "Site Layout Planning for Daylight and Sunlight", 2022 (BR209).
- 2.2 BR209 sets out design guidance with the aim of providing sufficient access to light from the sky and sunlight in appropriate rooms of new and existing residential buildings and amenity spaces.
- 2.3 The design criteria described in BR209 are meant to provide guidance for designers rather than a regulatory requirement. Designers are encouraged to apply the guidance so that it is sensitive to the development being assessed. The Proposed Development is in a high density, urban environment and as such, numerical targets should be interpreted flexibly, as advised in BR209. Dense urban areas and city centre developments may often experience greater constraints when compared to low-rise suburban areas, and thus a high degree of obstruction which leads to non-compliance with BRE guidance is often unavoidable.
- 2.4 In the following assessment, sunlight access to amenity spaces within the Proposed Development have been assessed against the criteria described in BR209.

3 Methodology

- 3.1 Sunlight exposure received by open amenity spaces within the Proposed Development have been assessed utilising a 3D computer model of the Proposed Development and surrounding context. The proposed massing used for this assessment was Populous architects' Revit buildings and landscape models, received on 13th March 2023.

3.1.1 Direct sunlight on amenity spaces

- 3.2 The excerpt from BR209 below summarises the methodology for assessing access to direct sunlight for gardens and amenity spaces.

"It is recommended that for it to appear adequately sunlit throughout the year, at least half of a garden or amenity area should receive at least two hours of sunlight on 21 March. If as a result of a new development an existing garden or amenity area does not meet the above, and the area which can receive two hours of sun on 21 March is less than 0.8 times its former value, then the loss of sunlight is likely to be noticeable. If a detailed calculation cannot be carried out, it is recommended that the centre of the area should receive at least two hours of sunlight on 21 March."

3.1.2 Identification of assessment locations

- 3.3 Open amenity spaces are assessed for exposure to sunlight on the March equinox, when sunrise is directly from the east and sunset is directly to the west, meaning that spaces located to the south of the Site are unshaded by the massing of the Proposed Development in the context of BR209 guidance and are excluded from the assessment.
- 3.4 Figure 3—1 shows the locations of open amenity spaces potentially affected by the Proposed Development massing, outlined in green, comprising the City Square landscaping on the approach to the North Stand entrance and individual landscaped areas adjacent to the hotel entrance and access road.

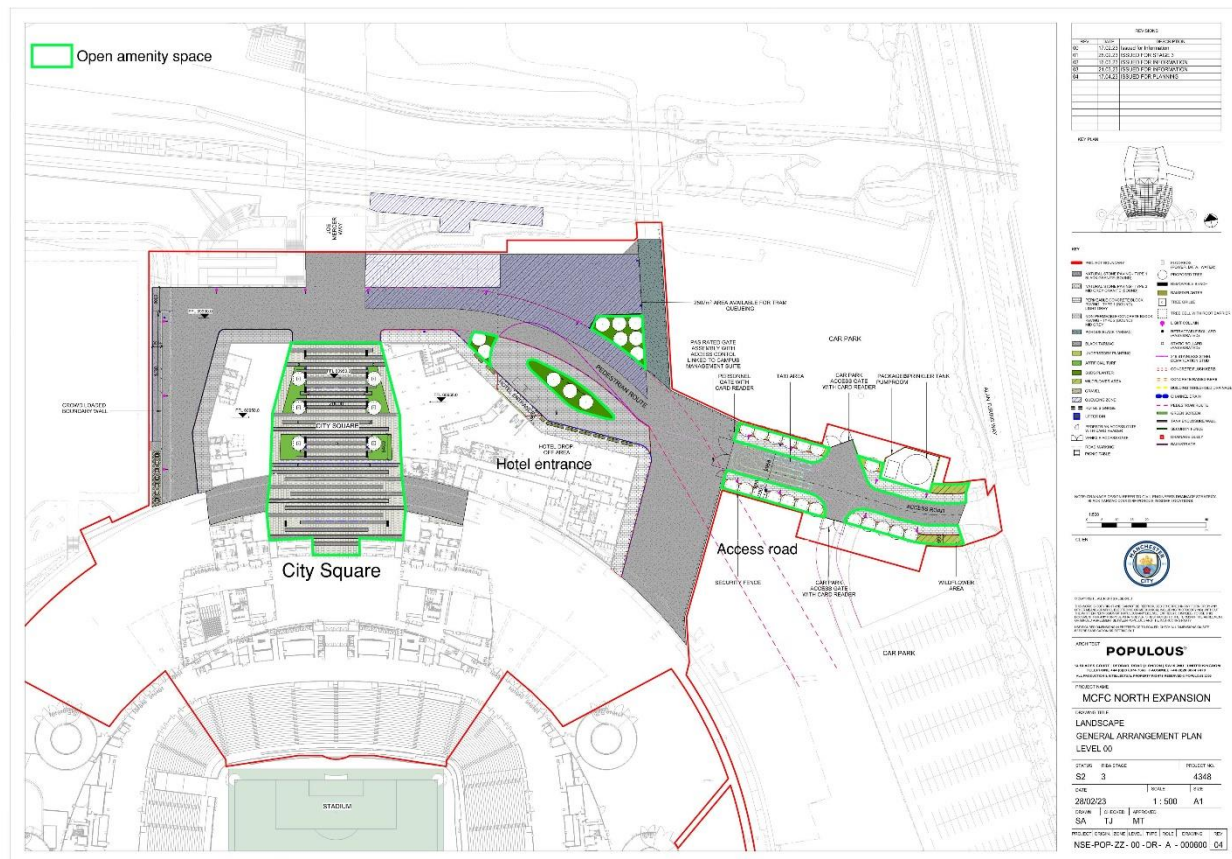


Figure 3—1 Assessment locations

3.1.3 Impact of the proposed development on its surroundings

3.5 BR209 Appendix H describes the impact of a development in terms of the change in the amount of skylight and sunlight reaching an existing building where it is required, or the amount of sunlight reaching an open space. It also states that, 'The assessment of impact will depend on a combination of factors, and there is no simple rule of thumb that can be applied'; however, guidance is provided on quantifying the significance of relative adverse changes as minor, moderate or major, as follows:

- Minor adverse impact on open spaces:
 - The affected open space only has a low level of requirement for sunlight.
- Major adverse impact on open spaces:
 - A large area of open space is affected.
- The impact is negligible if the guidance of BR209 is met.

4 Assessment results

4.1.1 Direct sunlight on amenity spaces

4.1 With reference to the shadow plots on the March equinox, shown in Figure 4—1, it can be seen that:

- City Square, adjacent to the North Stand entrance is shaded by both the North Stand and the proposed new buildings and will receive transient sunlight exposure for most of the day on less than 50% of its area, therefore not meeting BRE guidance. Considering the transient use of this space to enter and exit the stadium and its small area relative to the site area, the impact of the Proposed Development on City Square is minor adverse; and
- The landscaped areas to the northeast of the stadium will be unshaded by the Proposed Development from 07:00 to 09:00, with the northern and eastern extents of these areas continuing to receive sunlight until 14:00. As all these spaces will be fully exposed to sunlight for at least two hours on the March equinox, the impact of the Proposed Development on them is negligible.

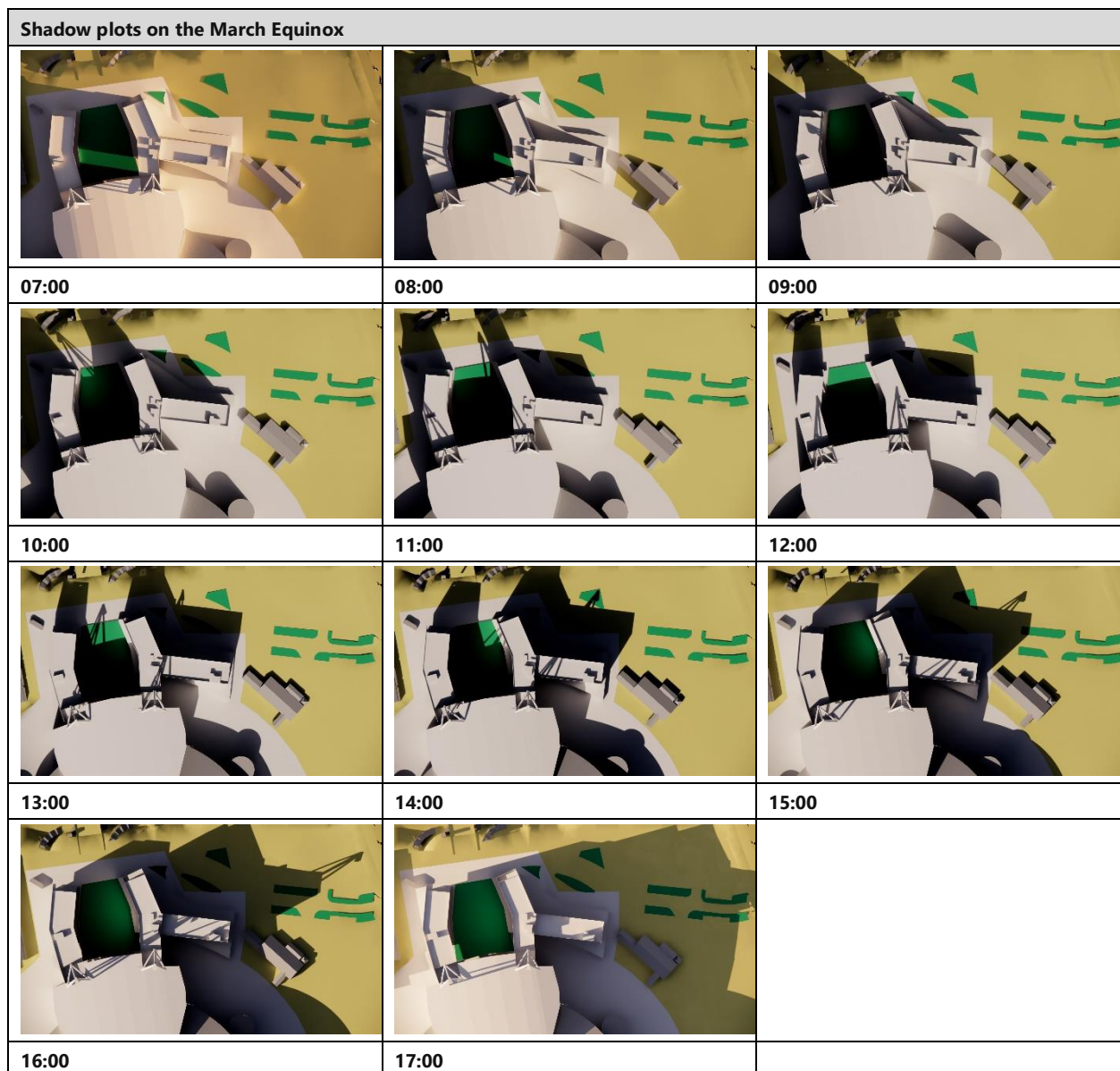


Figure 4—1 Shadow plots on the March equinox

4.2 Cumulative impact of proposed and future developments

- 4.2 A list of committed developments within 750m of the Site was provided in Deloitte's Environmental Statement Briefing Note, dated January 2023. No committed developments were found to be close enough to the Site to produce a cumulative impact, in combination with the Proposed Development, on sunlight availability on open amenity spaces within the Site.
- 4.3 The cumulative impact of proposed and future developments on the assessed open spaces is, therefore, negligible.

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