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# Permanent and Transient Overshadowing Report (Adjacent Amenity Spaces)

**Great Northern Warehouse Developments Limited**
**November 2022**

Leisurebox

Great Northern

Manchester

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# 1.0 Introduction

## 1.1 Instructions

The brief for this commission is the preparation of an Overshadowing Report to identify any areas where the development proposals as set out on the Architects proposed plans and elevations could potentially cause issues of overshadowing to the nearby amenity spaces.

The effect of the development on light received by windows to adjacent buildings would usually be considered by carrying out a Daylight Sunlight Study report (measures of light considered by Planning Authorities) and are not covered by this report.

This report will cover as requested the following:

- Set out policies and accepted principals for assessing overshadowing
- Establish which of the surrounding land/amenity spaces may be affected
- Assess the impact of shadows cast on the surrounding land/amenity spaces

The report will be based on a computer analysis of the path of the sun at various times of the year and the impact of the new development on the shadow that is cast on nearby amenity spaces. The images from the computer analysis are enclosed at Appendix A.

## 1.2 Site and Surrounding Properties

The proposed development site is rectangular in plan and is located adjacent to Deansgate and can be broadly divided into four components comprising:

- Great Northern Square – located to the North of the application boundary, the square is an area of public realm with a mix of soft and hard landscaping with an amphitheatre-style seating arrangement in its centre, which currently acts as barrier to movement across the space
- Great Northern Warehouse and the modern atrium – a Graded II* Listed former railway goods warehouse built between 1896 and 1899, which was refurbished in 1999 to provide retail, commercial and car parking spaces (519 spaces)
- Leisure Box – a modern addition to the Warehouse following the 1999 refurbishments. The Leisure Box contains an Odeon cinema, the Gym and car parking (721 spaces)

- Deansgate Terrace –covers the length of Deansgate from Peter Street to Great Bridgewater Street. The 3 to 4 storey length of terraces is Grade II Listed and currently comprises a mix of retail, food & drink and commercial

The proposed scheme consists of the demolition of the existing cinema and surrounding elements and structures prior to conversion, reconfiguration and extension of existing car parking facility to provide 929 parking spaces, 753 cycle parking spaces and associated plant, followed by construction of three residential buildings to provide 746 no. apartments (Use Class C3) above the retained car park comprising 16, 27 and 34 storeys.

There are various amenity spaces near the development site as follows:

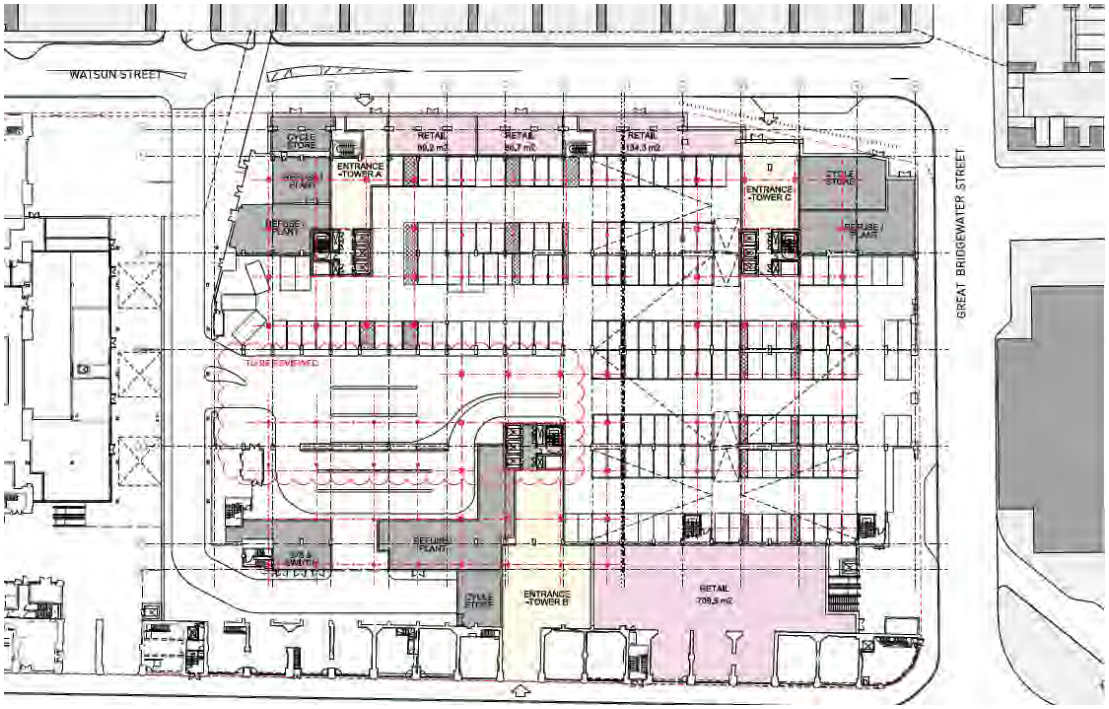
- Grass / tree areas within and around Porchfield Square (B11 - to the Northwest of the development site) – labelled A121 – A123
- Amenity space to North of the Great Northern building (B44 - near Peter Street) – A113
- Balcony / rooftop amenity spaces to the Great Northern Tower on Watson Street – A1 – A112

An aerial photograph and site plan of the development site is included below for information.

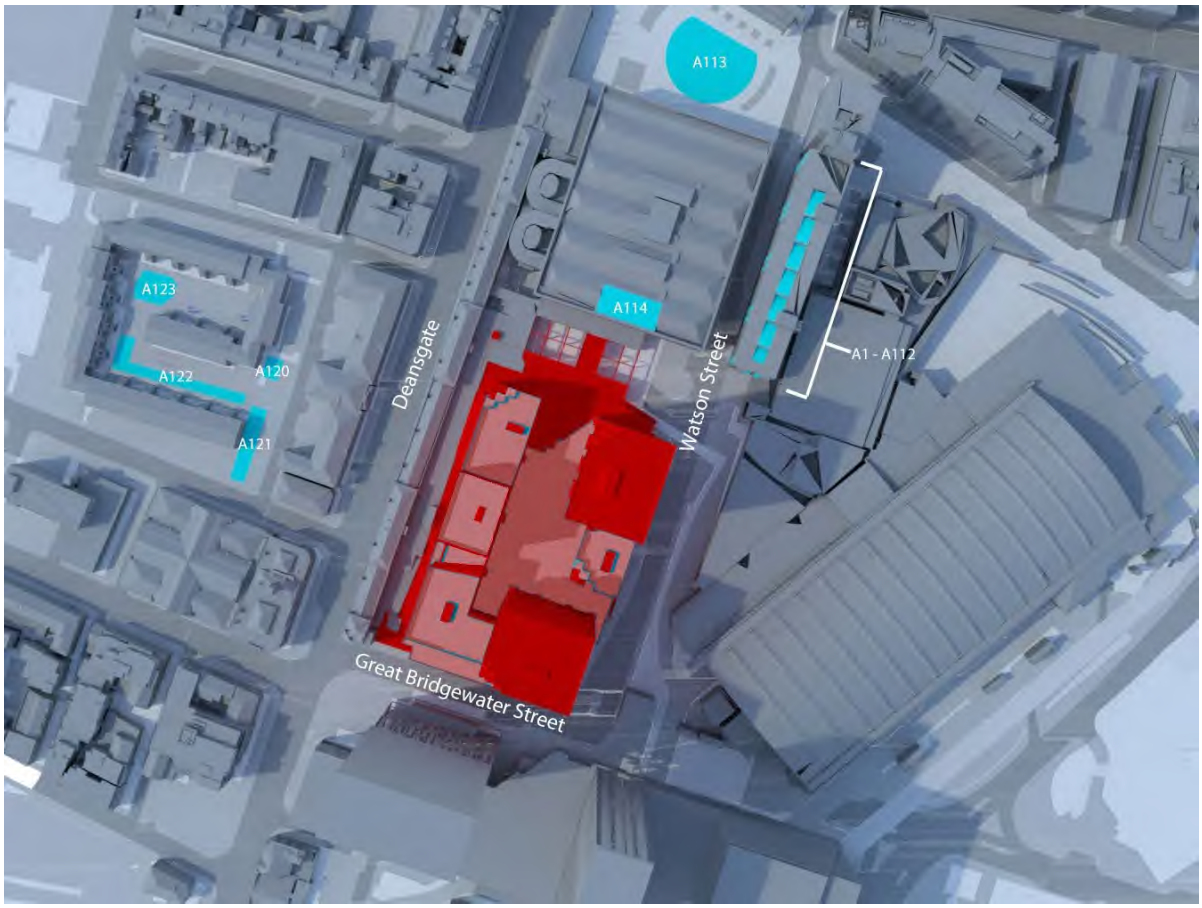
## Aerial Photograph



## Site Plan



Amenity space plan




In accordance with BRE guidelines, we have assessed the impact of the proposed development on the sunlight to the adjacent amenity areas listed above.

We have checked the Planning Portal to assess whether there are any other surrounding consented schemes that would create a cumulative impact and there is a proposed development adjacent to the Beetham Tower (known as Viadux). which has also been included as an existing mass. All other consented schemes are too remote/distant to have a cumulative overshadowing impact.

A 3D image marked up to show the location of the above amenity spaces is included in section 4 below.

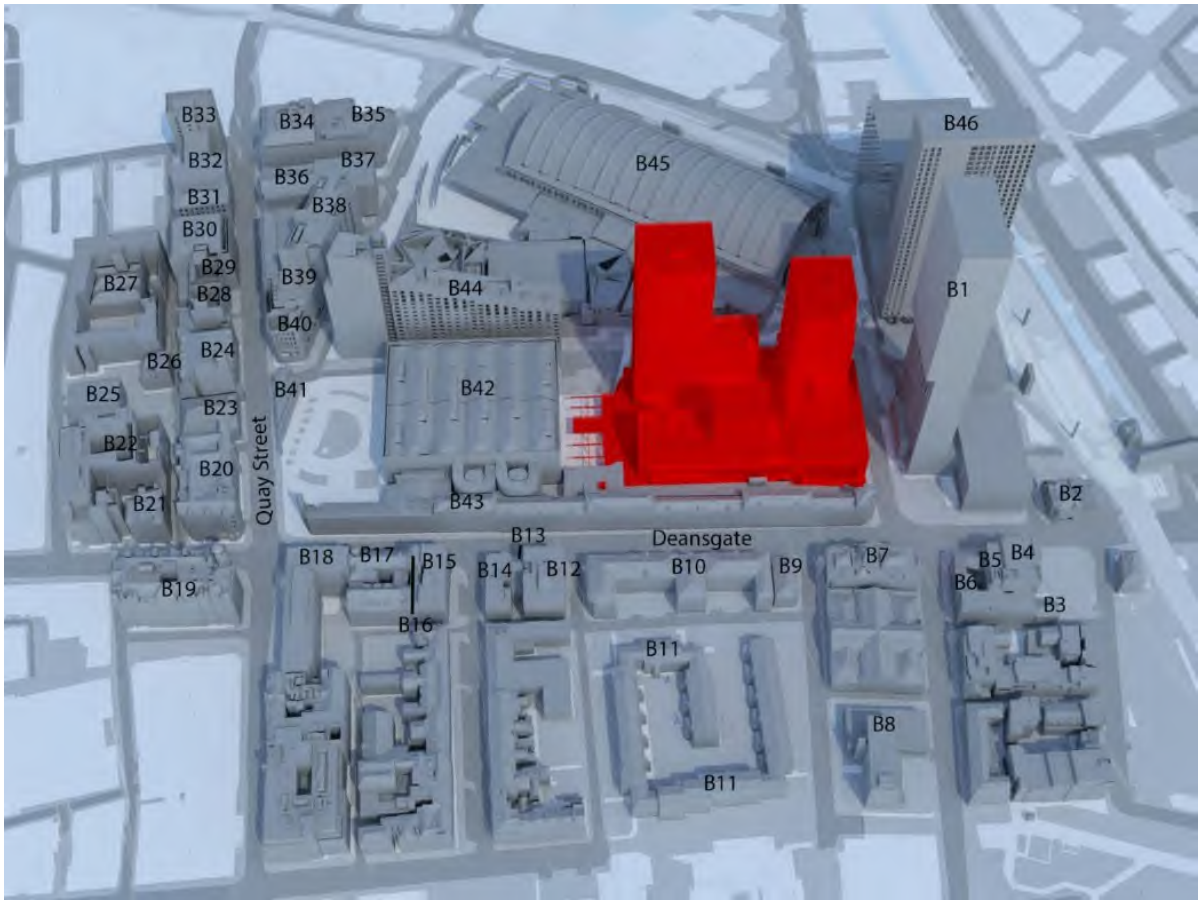
## 1.3 Proposed Scheme

Various drawings prepared by SimpsonHaugh architects were provided of the proposed development to allow us to carry out this report as follows:

CAD Model - 10422-SHP-4Z-A-G000-XX-003_Building

An image from the 3D model showing the proposed scheme is shown below:

Proposed Scheme



# 2.0 Permanent and Transient Overshadowing Polices and Guidance

## 2.1 Guidance

In the absence of official National Planning Guidance and legislation on overshadowing, it is usual to assess overshadowing in relation to the guidelines set out in the Building Research Establishment (BRE) report 'Site Layout Planning for Daylight and Sunlight - A Guide to Good Practice' by P. J. Littlefair (2022). We shall refer to this report throughout as the 'BRE'. One of the primary sources for the BRE document is the more detailed guidance contained within BS EN 17037 Daylight in buildings and in the CIBSE publication LG 10 Daylighting – a guide for designers.

The criteria contained in the BRE document are provided for guidance and should be interpreted flexibly. In its introduction the BRE report states *"The advice given here is not mandatory and the guide should not be seen as an instrument of planning policy; its aim is to help rather than constrain the designer. Although it gives numerical guidelines, these should be interpreted flexibly since natural lighting is only one of many factors in site layout design. In special circumstances the developer or planning authority may wish to use different target values. For example, in a historic city centre, or in an area with modern high-rise buildings, a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings."*

The BRE guidelines are therefore not mandatory and state that they should not be used as an instrument of Planning Policy, but they provide a good guide to the approach, methodology and evaluation of daylight and sunlight impacts, including overshadowing.

The BRE Guidelines acknowledge that, together with the provision of good natural light inside buildings, the natural lighting of the space surrounding the buildings is also important. There are two types of overshadowing that were considered in the assessment: Permanent Overshadowing and Transient Overshadowing.

## 2.2 Permanent Overshadowing

The method for assessing permanent shadow on the ground is the sun path indicator (or sunlight availability protractor). This maps the obstructions to the path of the sun and compares them to the known sun paths to determine where the sun would reach the ground and where it would not. A 3D computer model and light analysis software can also be used.

The worst situation is to have significant areas on which the sun does not shine for a large part of the year. Such areas would be dark, cold and uninviting. The method used for calculating the impacts of any shadowing was as set out in the BRE Guidance as follows:

*"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 new development an existing garden or amenity area does not meet the above, and the area that can receive two hours of sun on 21 March is less than 0.80 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".

## 2.3 Transient Overshadowing

The BRE Guidelines suggest that where large buildings are proposed which may affect a number of gardens or open spaces, it is useful and illustrative to plot a shadow plan to show the location of shadows at different times of the day and year. This can be plotted using 3D computer imagery and specialist shadowing software. For the purpose of this assessment the overshadowing has been mapped at two hour intervals between 10.00am and 4.00pm in March, June and December (September is assumed to be the same as March as per the BRE guide).

# 3.0 Methodology for Assessing Impact & Limitations

Since the sun rises in the East, and sets in the West, and is at its highest around midday to the South, for the purposes of examining overshadowing, only amenity spaces to the West of the site, through North, and round to East are relevant.

In order to determine the significance of any overshadowing effect, we have used the guidance within the BRE guidelines as set out above together with our professional opinion.

This method/guidelines have been used to assess the likely effects of the proposed development in relation to overshadowing.

In order to prepare this detailed report, a full 3D computer model has been created. The proposed development was modelled from the sources listed above. The site and surrounding properties were set out using a laser scan measured site survey. This has been converted into a 3D model suitable for running overshadowing analysis.

# 4.0 Review of Overshadowing Results

## 4.1 Permanent Overshadowing

The path of the sun and the shadow created by the new development has been analysed by creating a sun path tracking 3D computer model of the site/proposed and surrounding buildings and the results at two hour intervals for 21 March are attached at Appendix C.

Contour drawings and a results spreadsheet of the amenity areas receiving 2 hours of sun on 21 March are attached at Appendices A and B.

Adjacent Amenity Spaces

Adjacent Amenity Area A113 (Great Northern)

Amenity area A113 is located to the North of the proposed development and forms a public space to the Great Northern building.

A113 fully passes the BRE criteria due to the sunlight received generally throughout the day.

Adjacent Amenity Areas A1 to A112 (B44 Great Northern Tower)

Amenity areas A1 to A112 are located generally to Northeast of the proposed development, and are balconies and roof top terraces to the Great North Tower building (B44). Many of these

areas are already poorly sunlit due to their orientation and close proximity to B42 especially on floors first to fifth.

The proposed development only impacts on amenity spaces at the lower levels of the sloping section and as a result 86 of 112 areas (76%) pass the BRE criteria due to the sunlight received throughout the day.

Adjacent Amenity Areas A120 to A123 – (B11 Porchfield Square)
Amenity areas A120 & A123 are located generally to Northwest of the proposed development and are garden / amenity areas to B11 – Porchfield Square.

Amenity areas A120, A121, A123, all fully pass the BRE criteria, are largely unaffected by the proposed development and receive very good levels of sunlight.

Amenity area A122 currently does not receive much sunlight on 21st March (as it is a narrow area to the North of the existing houses) and this is reduced to a degree by the proposed development in the early part of the day. However, all other areas pass the BRE criteria as noted above.

The permanent overshadowing effect of the proposed development on adjacent areas is therefore considered acceptable.

## 4.2 Transient Overshadowing

The BRE guidelines do not provide criteria pertaining to the significance of transitory overshadowing. The guidelines simply suggest that by establishing the different times of day and year when shadow would be cast over surrounding areas, an indication is given as to the significance of the development's impact.

Adjacent Areas
Adjacent Amenity Area A113 (B42 – Great Northern)
Amenity space A113 does not have any additional overshadowing due to the proposed development.

Adjacent Amenity Areas A1 to A112 (B44 Great Northern Tower)

Amenity spaces A1 to A112 are located to the Northeast of the development site and are balconies and roof top terraces to the Great North Tower building (B44). Many of these areas are already poorly sunlit due to their orientation and close proximity to Great Northern building, especially on floors first to fifth.

The June 21st images show overshadowing for the summer equinox when the sun is of course at its highest and shadows are short. In June, the images show some additional overshadowing at the Southern end of the GNT from 1.30pm to 2.30pm (1 hour).

Either side of June, shadows do of course become longer as the sun is lower in the sky and are at their longest in December:

- In May / July – there is again overshadowing between 1.30pm and 2.30pm but the shadows are longer
- In April / August - there is overshadowing between 1.30pm and 3.30pm and the shadows are much longer and cover most of the GNT amenity areas
- In March / Sept - there is overshadowing between 1.30pm and 4.00pm and the shadows are cover most of the GNT amenity areas

Overall, we can see that in the main spring / summer periods, any additional overshadowing is for a very short period of between 1 and 2 hours, which is reasonable for an inner-city built-up environment.

Adjacent Amenity Areas A120 to A123 – (B11 Porchfield Square)

Amenity spaces A120 to A123 are located far to the Northwest of the proposed development, therefore the development does not have any significant overshadowing effect on these amenity spaces after 10am. There is a slight shadow cast on the amenity spaces at 10am on 21st March, however the amenity spaces are not affected during June / summer, as the shadows are shorter. As a result, the area receives consistent good levels of sunlight.

Overall, the images show that the amenity areas to the adjacent properties are not substantially affected by transient overshadowing.

# 5.0 Conclusions

The brief for this commission was the preparation of a Permanent & Transient Overshadowing Report to identify any areas where the development proposals as set out in the Architects plans referred to above could potentially cause an Overshadowing issue to nearby amenity spaces.

To produce this report we have carried out a site inspection and prepared a 3D computer model to obtain an accurate representation of the path of the sun and the shadow it would cast at various times of the year. The results from this modelling are included in Appendices A, B and C.

Our assessment specifically for permanent overshadowing on 21 March (BRE guide test) shows that the development does not substantially affect the surrounding areas and a large proportion the amenity areas as outlined above would still receive good amounts of sunlight in excess of the BRE guidelines.

Overall, we can see that in the main spring / summer periods, any additional overshadowing is for a very short period of between 1 and 2 hours, which is reasonable for an inner-city built-up environment.

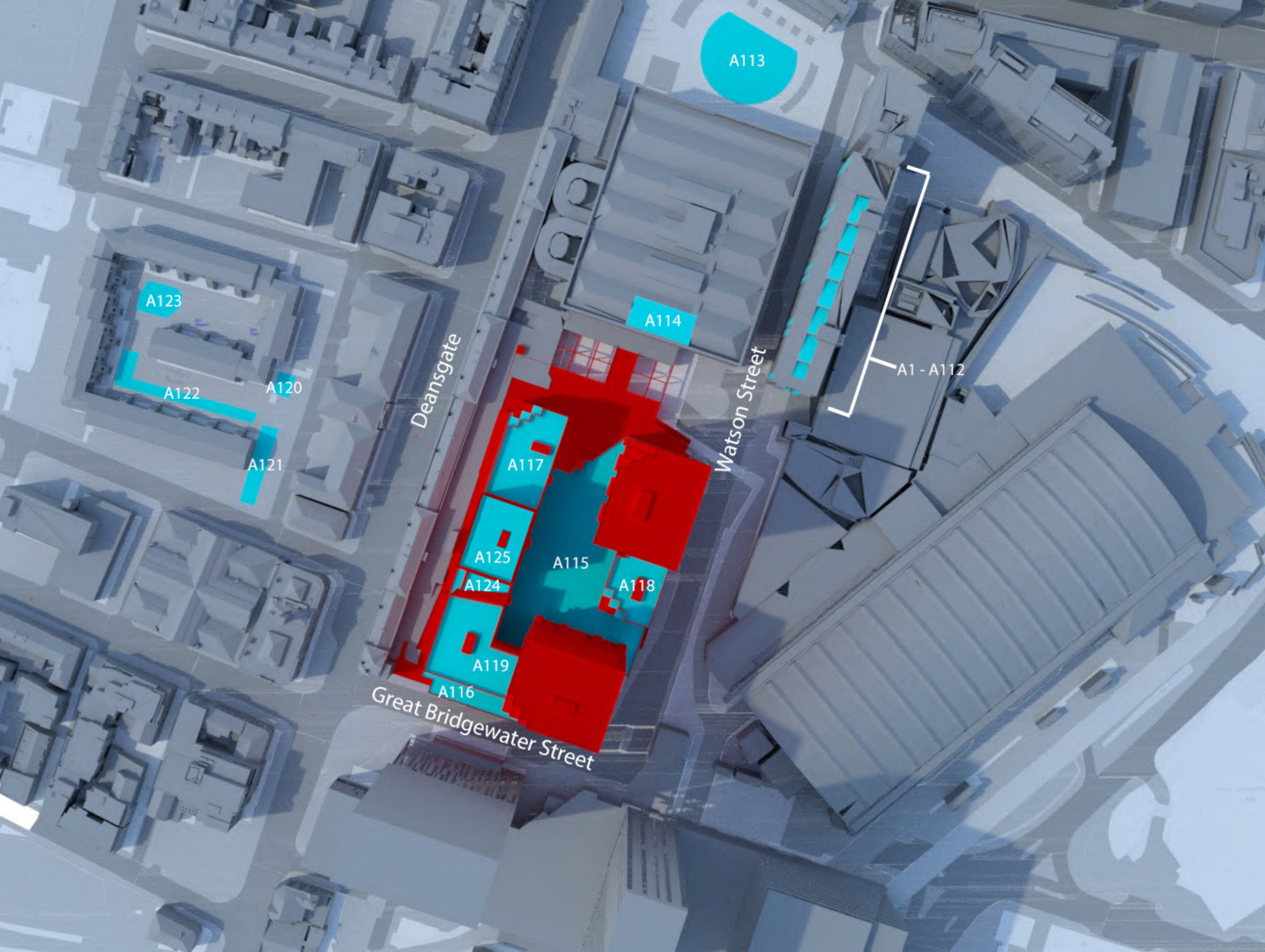
We trust this report is of assistance and look forward to receiving your further instructions. In the meantime, if you have any comments or queries please do not hesitate to contact me.

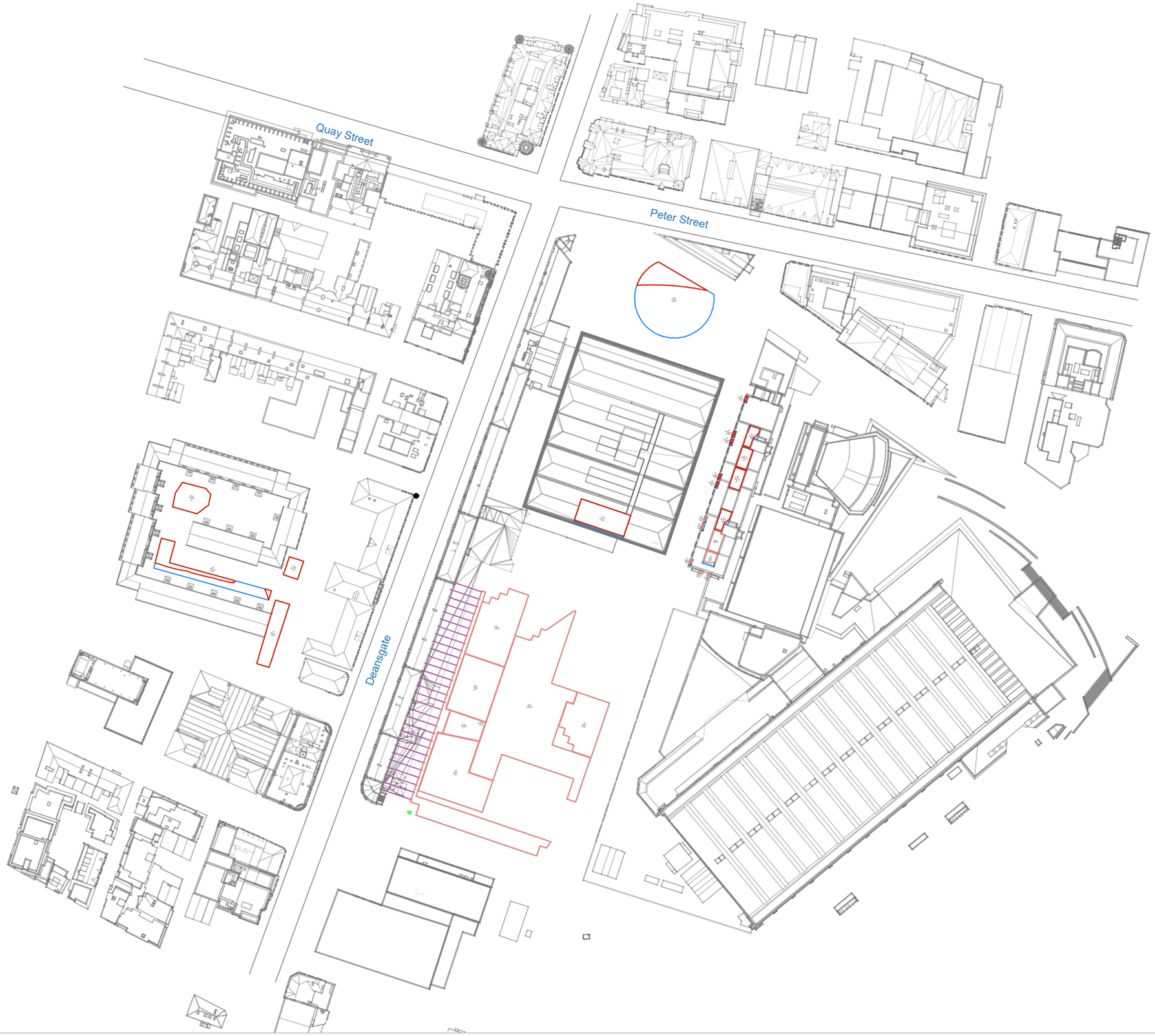
# 6.0 Conditions of Use of This Report

This report is to be regarded as confidential to and for the sole use of the recipient. Consequently, no responsibility is accepted to any third party in respect of its contents in whole or in part.

# Appendix A

## Permanent and Transient Overshadowing Images


A113
A114
A123
A122
A120
A121
A117
A125
A124
A115
A118
A119
A116
A1 - A112
Deansgate
Watson Street
Great Bridgewater Street




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| *Project Title* Leisurebox<br>Great Northern<br>Manchester | *Drawn* MA · *Date* 08/22<br>*Checked* PT · *Date* 08/22 |

A3 | *DWG No.* 18775 | *Scale* NTS | *Revision* B

# Appendix B

## Permanent and Transient Overshadowing Spreadsheet

Report Title: Two hours Sunlight to Amenity - Neighbour Analysis
Date of Analysis: 07/09/2022

| Floor Ref. | Amenity Ref. | | Amenity Area | Lit Area Existing | Lit Area Proposed | Pr/Ex | Meets BRE Criteria |
|---|---|---|---|---|---|---|---|
| **Proposed Development** | | | | | | | |
| Fourth | A115 | Area m2<br>Percentage | 2033.86 | 2033.86<br>100% | 190.91<br>9% | 0.09 | NO |
| Fourth | A116 | Area m2<br>Percentage | 660.69 | 660.69<br>100% | 420.29<br>64% | 0.64 | YES |
| Ninth | A117 | Area m2<br>Percentage | 569.99 | 569.99<br>100% | 262.20<br>46% | 0.46 | NO |
| Ninth | A118 | Area m2<br>Percentage | 395.70 | 395.70<br>100% | 0.00<br>0% | 0.00 | NO |
| Ninth | A119 | Area m2<br>Percentage | 694.13 | 694.13<br>100% | 435.94<br>63% | 0.63 | YES |
| Ninth | A124 | Area m2<br>Percentage | 160.37 | 160.37<br>100% | 0.00<br>0% | 0.00 | NO |
| Ninth | A125 | Area m2<br>Percentage | 479.51 | 479.51<br>100% | 418.15<br>87% | 0.87 | YES |

Total Fails 4

Report Title: Two hours Sunlight to Amenity - Neighbour Analysis
Date of Analysis:25/08/2022

| Floor Ref. | Amenity Ref. | | Amenity Area | Lit Area Existing | Lit Area Proposed | Pr/Ex | Meets BRE Criteria |
|---|---|---|---|---|---|---|---|
| | | | **B42** | | | | |
| Ground | A113 | Area m2<br>Percentage | 837.73 | 167.67<br>20% | 167.67<br>20% | 1.00 | YES |
| Six / roof | A114 | Area m2<br>Percentage | 249.60 | 231.74<br>93% | 231.67<br>93% | 1.00 | YES |

| | |
|---|---|
| Total Fails | 0 |

Report Title: Two hours Sunlight to Amenity - Neighbour Analysis
Date of Analysis: 07/03/2022

| Floor Ref. | Amenity Ref. | | Amenity Area | Lit Area Existing | Lit Area Proposed | Pr/Ex | Meets BRE Criteria |
|---|---|---|---|---|---|---|---|
| | | | **B44** | | | | |
| First | A1 | Area m2<br>Percentage | 2.64 | 0.00<br>0% | 0.00<br>0% | 1.00 | YES |
| First | A2 | Area m2<br>Percentage | 2.64 | 0.00<br>0% | 0.00<br>0% | 1.00 | YES |
| First | A3 | Area m2<br>Percentage | 2.64 | 0.00<br>0% | 0.00<br>0% | 1.00 | YES |
| First | A4 | Area m2<br>Percentage | 2.64 | 0.00<br>0% | 0.00<br>0% | 1.00 | YES |
| First | A5 | Area m2<br>Percentage | 2.64 | 0.00<br>0% | 0.00<br>0% | 1.00 | YES |
| First | A6 | Area m2<br>Percentage | 2.64 | 0.00<br>0% | 0.00<br>0% | 1.00 | YES |
| First | A7 | Area m2<br>Percentage | 2.64 | 0.00<br>0% | 0.00<br>0% | 1.00 | YES |
| First | A8 | Area m2<br>Percentage | 2.64 | 1.80<br>68% | 0.00<br>0% | 0.00 | NO |
| Second | A9 | Area m2<br>Percentage | 2.64 | 0.00<br>0% | 0.00<br>0% | 1.00 | YES |
| Second | A10 | Area m2<br>Percentage | 2.64 | 0.00<br>0% | 0.00<br>0% | 1.00 | YES |
| Second | A11 | Area m2<br>Percentage | 2.64 | 0.00<br>0% | 0.00<br>0% | 1.00 | YES |
| Second | A12 | Area m2<br>Percentage | 2.64 | 0.00<br>0% | 0.00<br>0% | 1.00 | YES |
| Second | A13 | Area m2<br>Percentage | 2.64 | 0.00<br>0% | 0.00<br>0% | 1.00 | YES |
| Second | A14 | Area m2<br>Percentage | 2.64 | 0.00<br>0% | 0.00<br>0% | 1.00 | YES |
| Second | A15 | Area m2<br>Percentage | 2.64 | 0.00<br>0% | 0.00<br>0% | 1.00 | YES |
| Second | A16 | Area m2<br>Percentage | 2.64 | 1.97<br>75% | 0.00<br>0% | 0.00 | NO |
| Second | A17 | Area m2<br>Percentage | 1.55 | 1.53<br>98% | 1.53<br>98% | 1.00 | YES |
| Second | A18 | Area m2<br>Percentage | 1.55 | 1.55<br>100% | 1.33<br>85% | 0.85 | YES |
| Third | A19 | Area m2<br>Percentage | 2.64 | 0.00<br>0% | 0.00<br>0% | 1.00 | YES |
| Third | A20 | Area m2<br>Percentage | 2.64 | 0.00<br>0% | 0.00<br>0% | 1.00 | YES |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Third | A21 | Area m2<br>Percentage | 2.64 | 0.00<br>0% | 0.00<br>0% | 1.00 | YES |
| Third | A22 | Area m2<br>Percentage | 2.64 | 0.00<br>0% | 0.00<br>0% | 1.00 | YES |
| Third | A23 | Area m2<br>Percentage | 2.64 | 0.00<br>0% | 0.00<br>0% | 1.00 | YES |
| Third | A24 | Area m2<br>Percentage | 2.64 | 0.00<br>0% | 0.00<br>0% | 1.00 | YES |
| Third | A25 | Area m2<br>Percentage | 2.64 | 0.00<br>0% | 0.00<br>0% | 1.00 | YES |
| Third | A26 | Area m2<br>Percentage | 2.64 | 1.96<br>74% | 0.00<br>0% | 0.00 | NO |
| Third | A27 | Area m2<br>Percentage | 1.55 | 1.53<br>98% | 1.53<br>98% | 1.00 | YES |
| Third | A28 | Area m2<br>Percentage | 1.55 | 1.55<br>100% | 1.34<br>86% | 0.86 | YES |
| Fourth | A29 | Area m2<br>Percentage | 2.64 | 0.00<br>0% | 0.00<br>0% | 1.00 | YES |
| Fourth | A30 | Area m2<br>Percentage | 2.64 | 0.00<br>0% | 0.00<br>0% | 1.00 | YES |
| Fourth | A31 | Area m2<br>Percentage | 2.64 | 0.00<br>0% | 0.00<br>0% | 1.00 | YES |
| Fourth | A32 | Area m2<br>Percentage | 2.64 | 0.00<br>0% | 0.00<br>0% | 1.00 | YES |
| Fourth | A33 | Area m2<br>Percentage | 2.64 | 0.00<br>0% | 0.00<br>0% | 1.00 | YES |
| Fourth | A34 | Area m2<br>Percentage | 2.64 | 0.00<br>0% | 0.00<br>0% | 1.00 | YES |
| Fourth | A35 | Area m2<br>Percentage | 2.64 | 0.00<br>0% | 0.00<br>0% | 1.00 | YES |
| Fourth | A36 | Area m2<br>Percentage | 2.64 | 1.97<br>75% | 0.01<br>0% | 0.00 | NO |
| Fourth | A37 | Area m2<br>Percentage | 1.55 | 1.53<br>98% | 1.53<br>98% | 1.00 | YES |
| Fourth | A38 | Area m2<br>Percentage | 1.55 | 1.55<br>100% | 1.34<br>86% | 0.86 | YES |
| Fifth | A39 | Area m2<br>Percentage | 2.64 | 0.44<br>17% | 0.00<br>0% | 0.00 | NO |
| Fifth | A40 | Area m2<br>Percentage | 2.64 | 0.57<br>21% | 0.00<br>0% | 0.00 | NO |
| Fifth | A41 | Area m2<br>Percentage | 2.64 | 0.45<br>17% | 0.00<br>0% | 0.00 | NO |
| Fifth | A42 | Area m2<br>Percentage | 2.64 | 0.00<br>0% | 0.00<br>0% | 0.00 | NO |
| Fifth | A43 | Area m2<br>Percentage | 2.64 | 0.00<br>0% | 0.00<br>0% | 1.00 | YES |
| Fifth | A44 | Area m2<br>Percentage | 2.64 | 0.04<br>1% | 0.00<br>0% | 0.00 | NO |
| Fifth | A45 | Area m2<br>Percentage | 2.64 | 0.00<br>0% | 0.00<br>0% | 1.00 | YES |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Fifth | A46 | Area m2<br>Percentage | 2.64 | 1.96<br>74% | 0.08<br>3% | 0.04 | NO |
| Fifth | A47 | Area m2<br>Percentage | 1.55 | 1.53<br>98% | 1.53<br>98% | 1.00 | YES |
| Fifth | A48 | Area m2<br>Percentage | 1.55 | 1.55<br>100% | 1.36<br>87% | 0.87 | YES |
| Sixth | A49 | Area m2<br>Percentage | 2.64 | 1.20<br>46% | 1.01<br>38% | 0.84 | YES |
| Sixth | A50 | Area m2<br>Percentage | 2.64 | 1.16<br>44% | 0.11<br>4% | 0.09 | NO |
| Sixth | A51 | Area m2<br>Percentage | 2.64 | 1.39<br>53% | 0.57<br>21% | 0.41 | NO |
| Sixth | A52 | Area m2<br>Percentage | 2.64 | 1.12<br>42% | 0.00<br>0% | 0.00 | NO |
| Sixth | A53 | Area m2<br>Percentage | 2.64 | 0.71<br>27% | 0.00<br>0% | 0.00 | NO |
| Sixth | A54 | Area m2<br>Percentage | 2.64 | 0.27<br>10% | 0.00<br>0% | 0.00 | NO |
| Sixth | A55 | Area m2<br>Percentage | 2.64 | 1.33<br>50% | 0.00<br>0% | 0.00 | NO |
| Sixth | A56 | Area m2<br>Percentage | 2.64 | 1.97<br>75% | 1.01<br>38% | 0.51 | NO |
| Sixth | A57 | Area m2<br>Percentage | 1.55 | 1.53<br>98% | 1.53<br>98% | 1.00 | YES |
| Sixth | A58 | Area m2<br>Percentage | 1.55 | 1.55<br>100% | 1.38<br>89% | 0.89 | YES |
| Seventh | A59 | Area m2<br>Percentage | 2.64 | 1.85<br>70% | 1.85<br>70% | 1.00 | YES |
| Seventh | A60 | Area m2<br>Percentage | 2.64 | 1.84<br>70% | 1.82<br>69% | 0.99 | YES |
| Seventh | A61 | Area m2<br>Percentage | 2.64 | 1.86<br>70% | 1.83<br>70% | 0.99 | YES |
| Seventh | A62 | Area m2<br>Percentage | 2.64 | 1.89<br>72% | 1.84<br>70% | 0.98 | YES |
| Seventh | A63 | Area m2<br>Percentage | 2.64 | 1.87<br>71% | 1.82<br>69% | 0.98 | YES |
| Seventh | A64 | Area m2<br>Percentage | 2.64 | 1.81<br>69% | 0.46<br>17% | 0.25 | NO |
| Seventh | A65 | Area m2<br>Percentage | 2.64 | 1.83<br>69% | 0.29<br>11% | 0.16 | NO |
| Seventh | A66 | Area m2<br>Percentage | 2.64 | 1.96<br>74% | 1.23<br>47% | 0.63 | NO |
| Seventh | A67 | Area m2<br>Percentage | 1.55 | 1.53<br>98% | 1.53<br>98% | 1.00 | YES |
| Seventh | A68 | Area m2<br>Percentage | 1.55 | 1.55<br>100% | 1.38<br>89% | 0.89 | YES |
| Eighth | A69 | Area m2<br>Percentage | 2.64 | 1.86<br>71% | 1.86<br>70% | 1.00 | YES |
| Eighth | A70 | Area m2<br>Percentage | 2.64 | 1.84<br>70% | 1.82<br>69% | 0.99 | YES |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Eighth | A71 | Area m2<br>Percentage | 2.64 | 1.83<br>69% | 1.80<br>68% | 0.98 | YES |
| Eighth | A72 | Area m2<br>Percentage | 2.64 | 1.86<br>70% | 1.81<br>69% | 0.97 | YES |
| Eighth | A73 | Area m2<br>Percentage | 2.64 | 1.93<br>73% | 1.88<br>71% | 0.97 | YES |
| Eighth | A74 | Area m2<br>Percentage | 2.64 | 1.80<br>68% | 0.44<br>17% | 0.24 | NO |
| Eighth | A75 | Area m2<br>Percentage | 2.64 | 1.83<br>69% | 0.29<br>11% | 0.16 | NO |
| Eighth | A76 | Area m2<br>Percentage | 2.64 | 1.78<br>67% | 0.00<br>0% | 0.00 | NO |
| Eighth | A77 | Area m2<br>Percentage | 1.55 | 1.53<br>98% | 1.53<br>98% | 1.00 | YES |
| Eighth | A78 | Area m2<br>Percentage | 1.55 | 1.55<br>100% | 1.39<br>90% | 0.90 | YES |
| Ninth | A79 | Area m2<br>Percentage | 2.64 | 1.85<br>70% | 1.85<br>70% | 1.00 | YES |
| Ninth | A80 | Area m2<br>Percentage | 2.64 | 1.93<br>73% | 1.92<br>73% | 0.99 | YES |
| Ninth | A81 | Area m2<br>Percentage | 2.64 | 1.82<br>69% | 1.80<br>68% | 0.98 | YES |
| Ninth | A82 | Area m2<br>Percentage | 2.64 | 1.85<br>70% | 1.80<br>68% | 0.97 | YES |
| Ninth | A83 | Area m2<br>Percentage | 2.64 | 1.86<br>71% | 1.80<br>68% | 0.97 | YES |
| Ninth | A84 | Area m2<br>Percentage | 2.64 | 1.84<br>70% | 0.82<br>31% | 0.44 | NO |
| Ninth | A85 | Area m2<br>Percentage | 2.64 | 1.83<br>69% | 0.27<br>10% | 0.15 | NO |
| Ninth | A86 | Area m2<br>Percentage | 27.64 | 22.30<br>81% | 19.65<br>71% | 0.88 | YES |
| Tenth | A87 | Area m2<br>Percentage | 2.64 | 1.99<br>75% | 1.99<br>75% | 1.00 | YES |
| Tenth | A88 | Area m2<br>Percentage | 2.64 | 2.00<br>76% | 1.99<br>75% | 0.99 | YES |
| Tenth | A89 | Area m2<br>Percentage | 2.64 | 2.08<br>79% | 2.06<br>78% | 0.99 | YES |
| Tenth | A90 | Area m2<br>Percentage | 2.64 | 1.82<br>69% | 1.77<br>67% | 0.97 | YES |
| Tenth | A91 | Area m2<br>Percentage | 2.64 | 1.82<br>69% | 1.75<br>66% | 0.96 | YES |
| Tenth | A92 | Area m2<br>Percentage | 2.64 | 1.81<br>69% | 0.43<br>16% | 0.24 | NO |
| Tenth | A93 | Area m2<br>Percentage | 43.94 | 43.46<br>99% | 42.71<br>97% | 0.98 | YES |
| Eleventh | A94 | Area m2<br>Percentage | 2.64 | 1.85<br>70% | 1.85<br>70% | 1.00 | YES |
| Eleventh | A95 | Area m2<br>Percentage | 2.64 | 2.00<br>76% | 1.99<br>75% | 1.00 | YES |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Eleventh | A96 | Area m2<br>Percentage | 2.64 | 1.86<br>71% | 1.84<br>70% | 0.99 | YES |
| Eleventh | A97 | Area m2<br>Percentage | 2.64 | 1.98<br>75% | 1.94<br>74% | 0.98 | YES |
| Eleventh | A98 | Area m2<br>Percentage | 2.64 | 1.82<br>69% | 1.75<br>66% | 0.96 | YES |
| Eleventh | A99 | Area m2<br>Percentage | 40.25 | 37.12<br>92% | 20.26<br>50% | 0.55 | YES |
| Twelfth | A100 | Area m2<br>Percentage | 2.64 | 2.02<br>77% | 2.02<br>77% | 1.00 | YES |
| Twelfth | A101 | Area m2<br>Percentage | 2.64 | 1.84<br>70% | 1.83<br>69% | 0.99 | YES |
| Twelfth | A102 | Area m2<br>Percentage | 2.64 | 1.99<br>75% | 1.97<br>75% | 0.99 | YES |
| Twelfth | A103 | Area m2<br>Percentage | 2.64 | 1.83<br>69% | 1.76<br>67% | 0.96 | YES |
| Thirteenth | A104 | Area m2<br>Percentage | 2.64 | 2.09<br>79% | 2.09<br>79% | 1.00 | YES |
| Thirteenth | A105 | Area m2<br>Percentage | 2.64 | 1.84<br>70% | 1.84<br>70% | 1.00 | YES |
| Thirteenth | A106 | Area m2<br>Percentage | 2.64 | 1.83<br>69% | 1.82<br>69% | 0.99 | YES |
| Thirteenth | A107 | Area m2<br>Percentage | 45.64 | 45.39<br>99% | 45.34<br>99% | 1.00 | YES |
| Fourteenth | A108 | Area m2<br>Percentage | 2.64 | 2.17<br>82% | 2.17<br>82% | 1.00 | YES |
| Fourteenth | A109 | Area m2<br>Percentage | 2.64 | 1.99<br>76% | 1.99<br>76% | 1.00 | YES |
| Fourteenth | A110 | Area m2<br>Percentage | 44.92 | 44.74<br>100% | 44.72<br>100% | 1.00 | YES |
| Fifteenth | A111 | Area m2<br>Percentage | 2.64 | 2.15<br>82% | 2.15<br>82% | 1.00 | YES |
| Fifteenth | A112 | Area m2<br>Percentage | 38.75 | 35.27<br>91% | 35.27<br>91% | 1.00 | YES |

Total Fails 26

Report Title: Two hours Sunlight to Amenity - Neighbour Analysis
Date of Analysis: 25/08/2022

| Floor Ref. | Amenity Ref. | | Amenity Area | Lit Area Existing | Lit Area Proposed | Pr/Ex | Meets BRE Criteria |
|---|---|---|---|---|---|---|---|
| | | | **B11** | | | | |
| Ground | A120 | Area m2<br>Percentage | 56.76 | 56.76<br>100% | 56.76<br>100% | 1.00 | YES |
| Ground | A121 | Area m2<br>Percentage | 183.14 | 183.04<br>100% | 176.04<br>96% | 0.96 | YES |
| Ground | A122 | Area m2<br>Percentage | 287.93 | 126.30<br>44% | 49.54<br>17% | 0.39 | NO |
| Ground | A123 | Area m2<br>Percentage | 164.84 | 164.84<br>100% | 163.16<br>99% | 0.99 | YES |

Total Fails 1

Project Name: Great Northern Overshadowing
Project No.: 18775
Report Title: Two hours Sunlight to Amenity - Neighbour Analysis
Date of Analysis: 23/08/2022

| Floor Ref. | Amenity Ref. | | Amenity Area | Lit Area Existing | Lit Area Proposed | Pr/Ex | Meets BRE Criteria |
|---|---|---|---|---|---|---|---|
| **Amenity** | | | | | | | |
| Ground | A113 | Area m2 | 837.73 | 167.67 | 167.67 | 1.00 | YES |
| | | Percentage | | 20% | 20% | | |
| Ground | A114 | Area m2 | 249.60 | 231.74 | 231.67 | 1.00 | YES |
| | | Percentage | | 93% | 93% | | |
| Ground | A120 | Area m2 | 56.76 | 56.76 | 56.76 | 1.00 | YES |
| | | Percentage | | 100% | 100% | | |
| Ground | A121 | Area m2 | 183.14 | 183.04 | 176.04 | 0.96 | YES |
| | | Percentage | | 100% | 96% | | |
| Ground | A122 | Area m2 | 287.93 | 126.30 | 49.54 | 0.39 | NO |
| | | Percentage | | 44% | 17% | | |
| Ground | A123 | Area m2 | 164.84 | 164.84 | 163.16 | 0.99 | YES |
| | | Percentage | | 100% | 99% | | |
| First | A1 | Area m2 | 2.64 | 0.00 | 0.00 | 1.00 | YES |
| | | Percentage | | 0% | 0% | | |
| First | A2 | Area m2 | 2.64 | 0.00 | 0.00 | 1.00 | YES |
| | | Percentage | | 0% | 0% | | |
| First | A3 | Area m2 | 2.64 | 0.00 | 0.00 | 1.00 | YES |
| | | Percentage | | 0% | 0% | | |
| First | A4 | Area m2 | 2.64 | 0.00 | 0.00 | 1.00 | YES |
| | | Percentage | | 0% | 0% | | |
| First | A5 | Area m2 | 2.64 | 0.00 | 0.00 | 1.00 | YES |
| | | Percentage | | 0% | 0% | | |
| First | A6 | Area m2 | 2.64 | 0.00 | 0.00 | 1.00 | YES |
| | | Percentage | | 0% | 0% | | |
| First | A7 | Area m2 | 2.64 | 0.00 | 0.00 | 1.00 | YES |
| | | Percentage | | 0% | 0% | | |
| First | A8 | Area m2 | 2.64 | 1.80 | 0.00 | 0.00 | NO |
| | | Percentage | | 68% | 0% | | |
| Second | A9 | Area m2 | 2.64 | 0.00 | 0.00 | 1.00 | YES |
| | | Percentage | | 0% | 0% | | |
| Second | A10 | Area m2 | 2.64 | 0.00 | 0.00 | 1.00 | YES |
| | | Percentage | | 0% | 0% | | |
| Second | A11 | Area m2 | 2.64 | 0.00 | 0.00 | 1.00 | YES |
| | | Percentage | | 0% | 0% | | |
| Second | A12 | Area m2 | 2.64 | 0.00 | 0.00 | 1.00 | YES |
| | | Percentage | | 0% | 0% | | |
| Second | A13 | Area m2 | 2.64 | 0.00 | 0.00 | 1.00 | YES |
| | | Percentage | | 0% | 0% | | |
| Second | A14 | Area m2 | 2.64 | 0.00 | 0.00 | 1.00 | YES |
| | | Percentage | | 0% | 0% | | |
| Second | A15 | Area m2 | 2.64 | 0.00 | 0.00 | 1.00 | YES |
| | | Percentage | | 0% | 0% | | |
| Second | A16 | Area m2 | 2.64 | 1.97 | 0.00 | 0.00 | NO |
| | | Percentage | | 75% | 0% | | |

Project Name: Great Northern Overshadowing
Project No.: 18775
Report Title: Two hours Sunlight to Amenity - Neighbour Analysis
Date of Analysis: 23/08/2022

| Floor Ref. | Amenity Ref. | | Amenity Area | Lit Area Existing | Lit Area Proposed | Pr/Ex | Meets BRE Criteria |
|---|---|---|---|---|---|---|---|
| Second | A17 | Area m2<br>Percentage | 1.55 | 1.53<br>98% | 1.53<br>98% | 1.00 | YES |
| Second | A18 | Area m2<br>Percentage | 1.55 | 1.55<br>100% | 1.33<br>85% | 0.85 | YES |
| Third | A19 | Area m2<br>Percentage | 2.64 | 0.00<br>0% | 0.00<br>0% | 1.00 | YES |
| Third | A20 | Area m2<br>Percentage | 2.64 | 0.00<br>0% | 0.00<br>0% | 1.00 | YES |
| Third | A21 | Area m2<br>Percentage | 2.64 | 0.00<br>0% | 0.00<br>0% | 1.00 | YES |
| Third | A22 | Area m2<br>Percentage | 2.64 | 0.00<br>0% | 0.00<br>0% | 1.00 | YES |
| Third | A23 | Area m2<br>Percentage | 2.64 | 0.00<br>0% | 0.00<br>0% | 1.00 | YES |
| Third | A24 | Area m2<br>Percentage | 2.64 | 0.00<br>0% | 0.00<br>0% | 1.00 | YES |
| Third | A25 | Area m2<br>Percentage | 2.64 | 0.00<br>0% | 0.00<br>0% | 1.00 | YES |
| Third | A26 | Area m2<br>Percentage | 2.64 | 1.96<br>74% | 0.00<br>0% | 0.00 | NO |
| Third | A27 | Area m2<br>Percentage | 1.55 | 1.53<br>98% | 1.53<br>98% | 1.00 | YES |
| Third | A28 | Area m2<br>Percentage | 1.55 | 1.55<br>100% | 1.34<br>86% | 0.86 | YES |
| Fourth | A29 | Area m2<br>Percentage | 2.64 | 0.00<br>0% | 0.00<br>0% | 1.00 | YES |
| Fourth | A30 | Area m2<br>Percentage | 2.64 | 0.00<br>0% | 0.00<br>0% | 1.00 | YES |
| Fourth | A31 | Area m2<br>Percentage | 2.64 | 0.00<br>0% | 0.00<br>0% | 1.00 | YES |
| Fourth | A32 | Area m2<br>Percentage | 2.64 | 0.00<br>0% | 0.00<br>0% | 1.00 | YES |
| Fourth | A33 | Area m2<br>Percentage | 2.64 | 0.00<br>0% | 0.00<br>0% | 1.00 | YES |
| Fourth | A34 | Area m2<br>Percentage | 2.64 | 0.00<br>0% | 0.00<br>0% | 1.00 | YES |
| Fourth | A35 | Area m2<br>Percentage | 2.64 | 0.00<br>0% | 0.00<br>0% | 1.00 | YES |
| Fourth | A36 | Area m2<br>Percentage | 2.64 | 1.97<br>75% | 0.01<br>0% | 0.00 | NO |
| Fourth | A37 | Area m2<br>Percentage | 1.55 | 1.53<br>98% | 1.53<br>98% | 1.00 | YES |
| Fourth | A38 | Area m2<br>Percentage | 1.55 | 1.55<br>100% | 1.34<br>86% | 0.86 | YES |
| Fourth | A115 | Area m2<br>Percentage | 2033.86 | 2033.86<br>100% | 190.91<br>9% | 0.09 | NO |
| Fourth | A116 | Area m2<br>Percentage | 660.69 | 660.69<br>100% | 420.29<br>64% | 0.64 | YES |

Project Name: Great Northern Overshadowing
Project No.: 18775
Report Title: Two hours Sunlight to Amenity - Neighbour Analysis
Date of Analysis: 23/08/2022

| Floor Ref. | Amenity Ref. | | Amenity Area | Lit Area Existing | Lit Area Proposed | Pr/Ex | Meets BRE Criteria |
|---|---|---|---|---|---|---|---|
| Fifth | A39 | Area m2<br>Percentage | 2.64 | 0.44<br>17% | 0.00<br>0% | 0.00 | NO |
| Fifth | A40 | Area m2<br>Percentage | 2.64 | 0.57<br>21% | 0.00<br>0% | 0.00 | NO |
| Fifth | A41 | Area m2<br>Percentage | 2.64 | 0.45<br>17% | 0.00<br>0% | 0.00 | NO |
| Fifth | A42 | Area m2<br>Percentage | 2.64 | 0.00<br>0% | 0.00<br>0% | 0.00 | NO |
| Fifth | A43 | Area m2<br>Percentage | 2.64 | 0.00<br>0% | 0.00<br>0% | 1.00 | YES |
| Fifth | A44 | Area m2<br>Percentage | 2.64 | 0.04<br>1% | 0.00<br>0% | 0.00 | NO |
| Fifth | A45 | Area m2<br>Percentage | 2.64 | 0.00<br>0% | 0.00<br>0% | 1.00 | YES |
| Fifth | A46 | Area m2<br>Percentage | 2.64 | 1.96<br>74% | 0.08<br>3% | 0.04 | NO |
| Fifth | A47 | Area m2<br>Percentage | 1.55 | 1.53<br>98% | 1.53<br>98% | 1.00 | YES |
| Fifth | A48 | Area m2<br>Percentage | 1.55 | 1.55<br>100% | 1.36<br>87% | 0.87 | YES |
| Sixth | A49 | Area m2<br>Percentage | 2.64 | 1.20<br>46% | 1.01<br>38% | 0.84 | YES |
| Sixth | A50 | Area m2<br>Percentage | 2.64 | 1.16<br>44% | 0.11<br>4% | 0.09 | NO |
| Sixth | A51 | Area m2<br>Percentage | 2.64 | 1.39<br>53% | 0.57<br>21% | 0.41 | NO |
| Sixth | A52 | Area m2<br>Percentage | 2.64 | 1.12<br>42% | 0.00<br>0% | 0.00 | NO |
| Sixth | A53 | Area m2<br>Percentage | 2.64 | 0.71<br>27% | 0.00<br>0% | 0.00 | NO |
| Sixth | A54 | Area m2<br>Percentage | 2.64 | 0.27<br>10% | 0.00<br>0% | 0.00 | NO |
| Sixth | A55 | Area m2<br>Percentage | 2.64 | 1.33<br>50% | 0.00<br>0% | 0.00 | NO |
| Sixth | A56 | Area m2<br>Percentage | 2.64 | 1.97<br>75% | 1.01<br>38% | 0.51 | NO |
| Sixth | A57 | Area m2<br>Percentage | 1.55 | 1.53<br>98% | 1.53<br>98% | 1.00 | YES |
| Sixth | A58 | Area m2<br>Percentage | 1.55 | 1.55<br>100% | 1.38<br>89% | 0.89 | YES |
| Seventh | A59 | Area m2<br>Percentage | 2.64 | 1.85<br>70% | 1.85<br>70% | 1.00 | YES |
| Seventh | A60 | Area m2<br>Percentage | 2.64 | 1.84<br>70% | 1.82<br>69% | 0.99 | YES |
| Seventh | A61 | Area m2<br>Percentage | 2.64 | 1.86<br>70% | 1.83<br>70% | 0.99 | YES |
| Seventh | A62 | Area m2<br>Percentage | 2.64 | 1.89<br>72% | 1.84<br>70% | 0.98 | YES |

Project Name: Great Northern Overshadowing
Project No.: 18775
Report Title: Two hours Sunlight to Amenity - Neighbour Analysis
Date of Analysis: 23/08/2022

| Floor Ref. | Amenity Ref. | | Amenity Area | Lit Area Existing | Lit Area Proposed | Pr/Ex | Meets BRE Criteria |
|---|---|---|---|---|---|---|---|
| Seventh | A63 | Area m2 | 2.64 | 1.87 | 1.82 | 0.98 | YES |
| | | Percentage | | 71% | 69% | | |
| Seventh | A64 | Area m2 | 2.64 | 1.81 | 0.46 | 0.25 | NO |
| | | Percentage | | 69% | 17% | | |
| Seventh | A65 | Area m2 | 2.64 | 1.83 | 0.29 | 0.16 | NO |
| | | Percentage | | 69% | 11% | | |
| Seventh | A66 | Area m2 | 2.64 | 1.96 | 1.23 | 0.63 | NO |
| | | Percentage | | 74% | 47% | | |
| Seventh | A67 | Area m2 | 1.55 | 1.53 | 1.53 | 1.00 | YES |
| | | Percentage | | 98% | 98% | | |
| Seventh | A68 | Area m2 | 1.55 | 1.55 | 1.38 | 0.89 | YES |
| | | Percentage | | 100% | 89% | | |
| Eighth | A69 | Area m2 | 2.64 | 1.86 | 1.86 | 1.00 | YES |
| | | Percentage | | 71% | 70% | | |
| Eighth | A70 | Area m2 | 2.64 | 1.84 | 1.82 | 0.99 | YES |
| | | Percentage | | 70% | 69% | | |
| Eighth | A71 | Area m2 | 2.64 | 1.83 | 1.80 | 0.98 | YES |
| | | Percentage | | 69% | 68% | | |
| Eighth | A72 | Area m2 | 2.64 | 1.86 | 1.81 | 0.97 | YES |
| | | Percentage | | 70% | 69% | | |
| Eighth | A73 | Area m2 | 2.64 | 1.93 | 1.88 | 0.97 | YES |
| | | Percentage | | 73% | 71% | | |
| Eighth | A74 | Area m2 | 2.64 | 1.80 | 0.44 | 0.24 | NO |
| | | Percentage | | 68% | 17% | | |
| Eighth | A75 | Area m2 | 2.64 | 1.83 | 0.29 | 0.16 | NO |
| | | Percentage | | 69% | 11% | | |
| Eighth | A76 | Area m2 | 2.64 | 1.78 | 0.00 | 0.00 | NO |
| | | Percentage | | 67% | 0% | | |
| Eighth | A77 | Area m2 | 1.55 | 1.53 | 1.53 | 1.00 | YES |
| | | Percentage | | 98% | 98% | | |
| Eighth | A78 | Area m2 | 1.55 | 1.55 | 1.39 | 0.90 | YES |
| | | Percentage | | 100% | 90% | | |
| Ninth | A79 | Area m2 | 2.64 | 1.85 | 1.85 | 1.00 | YES |
| | | Percentage | | 70% | 70% | | |
| Ninth | A80 | Area m2 | 2.64 | 1.93 | 1.92 | 0.99 | YES |
| | | Percentage | | 73% | 73% | | |
| Ninth | A81 | Area m2 | 2.64 | 1.82 | 1.80 | 0.98 | YES |
| | | Percentage | | 69% | 68% | | |
| Ninth | A82 | Area m2 | 2.64 | 1.85 | 1.80 | 0.97 | YES |
| | | Percentage | | 70% | 68% | | |
| Ninth | A83 | Area m2 | 2.64 | 1.86 | 1.80 | 0.97 | YES |
| | | Percentage | | 71% | 68% | | |
| Ninth | A84 | Area m2 | 2.64 | 1.84 | 0.82 | 0.44 | NO |
| | | Percentage | | 70% | 31% | | |
| Ninth | A85 | Area m2 | 2.64 | 1.83 | 0.27 | 0.15 | NO |
| | | Percentage | | 69% | 10% | | |
| Ninth | A86 | Area m2 | 27.64 | 22.30 | 19.65 | 0.88 | YES |
| | | Percentage | | 81% | 71% | | |

Project Name: Great Northern Overshadowing
Project No.: 18775
Report Title: Two hours Sunlight to Amenity - Neighbour Analysis
Date of Analysis: 23/08/2022

| Floor Ref. | Amenity Ref. | | Amenity Area | Lit Area Existing | Lit Area Proposed | Pr/Ex | Meets BRE Criteria |
|---|---|---|---|---|---|---|---|
| Ninth | A117 | Area m2 | 569.99 | 569.99 | 262.20 | 0.46 | NO |
| | | Percentage | | 100% | 46% | | |
| Ninth | A118 | Area m2 | 395.70 | 395.70 | 0.00 | 0.00 | NO |
| | | Percentage | | 100% | 0% | | |
| Ninth | A119 | Area m2 | 694.13 | 694.13 | 435.94 | 0.63 | YES |
| | | Percentage | | 100% | 63% | | |
| Ninth | A124 | Area m2 | 160.37 | 160.37 | 0.00 | 0.00 | NO |
| | | Percentage | | 100% | 0% | | |
| Ninth | A125 | Area m2 | 479.51 | 479.51 | 418.15 | 0.87 | YES |
| | | Percentage | | 100% | 87% | | |
| Tenth | A87 | Area m2 | 2.64 | 1.99 | 1.99 | 1.00 | YES |
| | | Percentage | | 75% | 75% | | |
| Tenth | A88 | Area m2 | 2.64 | 2.00 | 1.99 | 0.99 | YES |
| | | Percentage | | 76% | 75% | | |
| Tenth | A89 | Area m2 | 2.64 | 2.08 | 2.06 | 0.99 | YES |
| | | Percentage | | 79% | 78% | | |
| Tenth | A90 | Area m2 | 2.64 | 1.82 | 1.77 | 0.97 | YES |
| | | Percentage | | 69% | 67% | | |
| Tenth | A91 | Area m2 | 2.64 | 1.82 | 1.75 | 0.96 | YES |
| | | Percentage | | 69% | 66% | | |
| Tenth | A92 | Area m2 | 2.64 | 1.81 | 0.43 | 0.24 | NO |
| | | Percentage | | 69% | 16% | | |
| Tenth | A93 | Area m2 | 43.94 | 43.46 | 42.71 | 0.98 | YES |
| | | Percentage | | 99% | 97% | | |
| Eleventh | A94 | Area m2 | 2.64 | 1.85 | 1.85 | 1.00 | YES |
| | | Percentage | | 70% | 70% | | |
| Eleventh | A95 | Area m2 | 2.64 | 2.00 | 1.99 | 1.00 | YES |
| | | Percentage | | 76% | 75% | | |
| Eleventh | A96 | Area m2 | 2.64 | 1.86 | 1.84 | 0.99 | YES |
| | | Percentage | | 71% | 70% | | |
| Eleventh | A97 | Area m2 | 2.64 | 1.98 | 1.94 | 0.98 | YES |
| | | Percentage | | 75% | 74% | | |
| Eleventh | A98 | Area m2 | 2.64 | 1.82 | 1.75 | 0.96 | YES |
| | | Percentage | | 69% | 66% | | |
| Eleventh | A99 | Area m2 | 40.25 | 37.12 | 20.26 | 0.55 | YES |
| | | Percentage | | 92% | 50% | | |
| Twelfth | A100 | Area m2 | 2.64 | 2.02 | 2.02 | 1.00 | YES |
| | | Percentage | | 77% | 77% | | |
| Twelfth | A101 | Area m2 | 2.64 | 1.84 | 1.83 | 0.99 | YES |
| | | Percentage | | 70% | 69% | | |
| Twelfth | A102 | Area m2 | 2.64 | 1.99 | 1.97 | 0.99 | YES |
| | | Percentage | | 75% | 75% | | |
| Twelfth | A103 | Area m2 | 2.64 | 1.83 | 1.76 | 0.96 | YES |
| | | Percentage | | 69% | 67% | | |
| Thirteenth | A104 | Area m2 | 2.64 | 2.09 | 2.09 | 1.00 | YES |
| | | Percentage | | 79% | 79% | | |
| Thirteenth | A105 | Area m2 | 2.64 | 1.84 | 1.84 | 1.00 | YES |
| | | Percentage | | 70% | 70% | | |

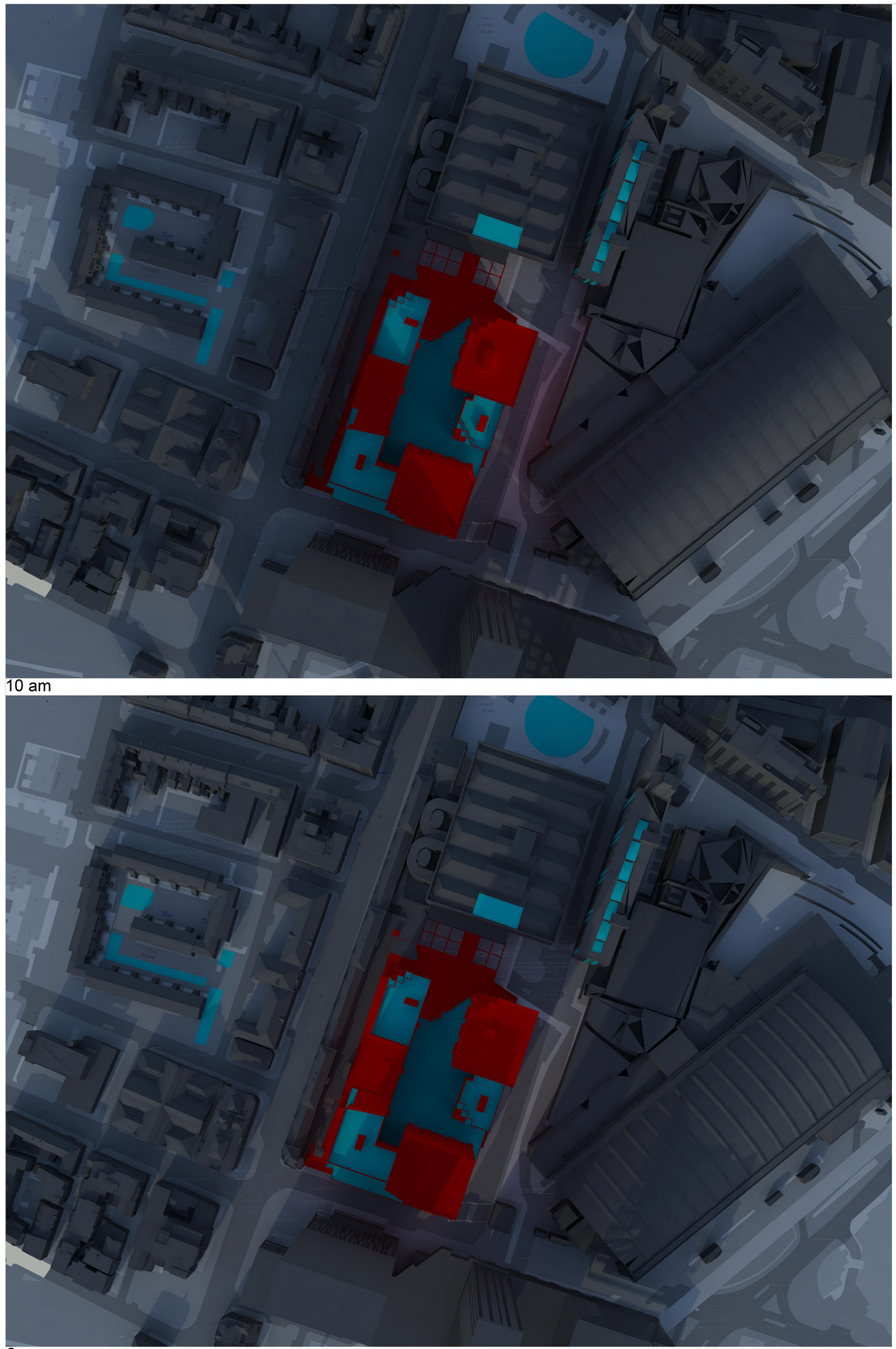
Project Name: Great Northern Overshadowing
Project No.: 18775
Report Title: Two hours Sunlight to Amenity - Neighbour Analysis
Date of Analysis: 23/08/2022

| Floor Ref. | Amenity Ref. | | Amenity Area | Lit Area Existing | Lit Area Proposed | Pr/Ex | Meets BRE Criteria |
|---|---|---|---|---|---|---|---|
| Thirteenth | A106 | Area m2<br>Percentage | 2.64 | 1.83<br>69% | 1.82<br>69% | 0.99 | YES |
| Thirteenth | A107 | Area m2<br>Percentage | 45.64 | 45.39<br>99% | 45.34<br>99% | 1.00 | YES |
| Fourteenth | A108 | Area m2<br>Percentage | 2.64 | 2.17<br>82% | 2.17<br>82% | 1.00 | YES |
| Fourteenth | A109 | Area m2<br>Percentage | 2.64 | 1.99<br>76% | 1.99<br>76% | 1.00 | YES |
| Fourteenth | A110 | Area m2<br>Percentage | 44.92 | 44.74<br>100% | 44.72<br>100% | 1.00 | YES |
| Fifteenth | A111 | Area m2<br>Percentage | 2.64 | 2.15<br>82% | 2.15<br>82% | 1.00 | YES |
| Fifteenth | A112 | Area m2<br>Percentage | 38.75 | 35.27<br>91% | 35.27<br>91% | 1.00 | YES |

Total Fails 31

# Appendix C

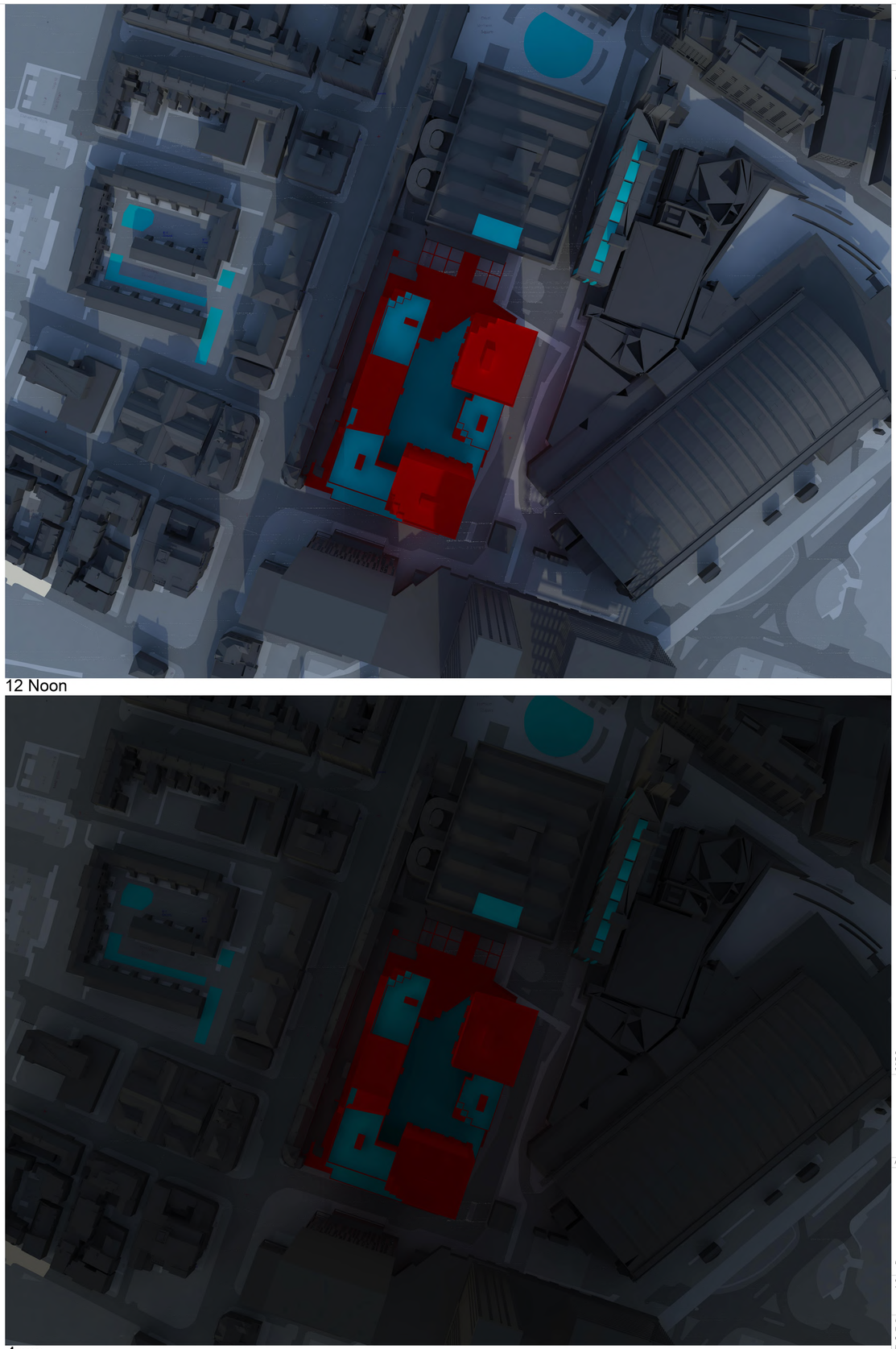
## Sun Path Shadow Images



10 am



2 pm



12 Noon



4 pm

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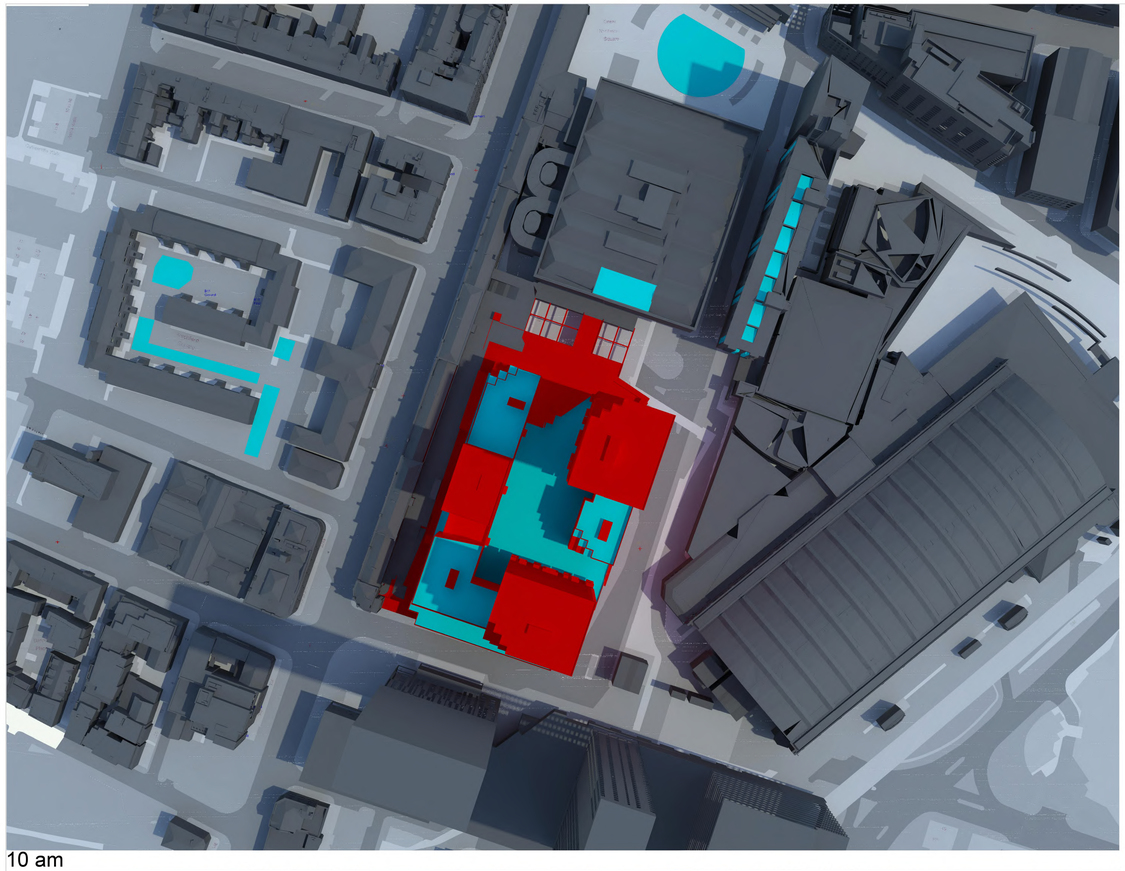
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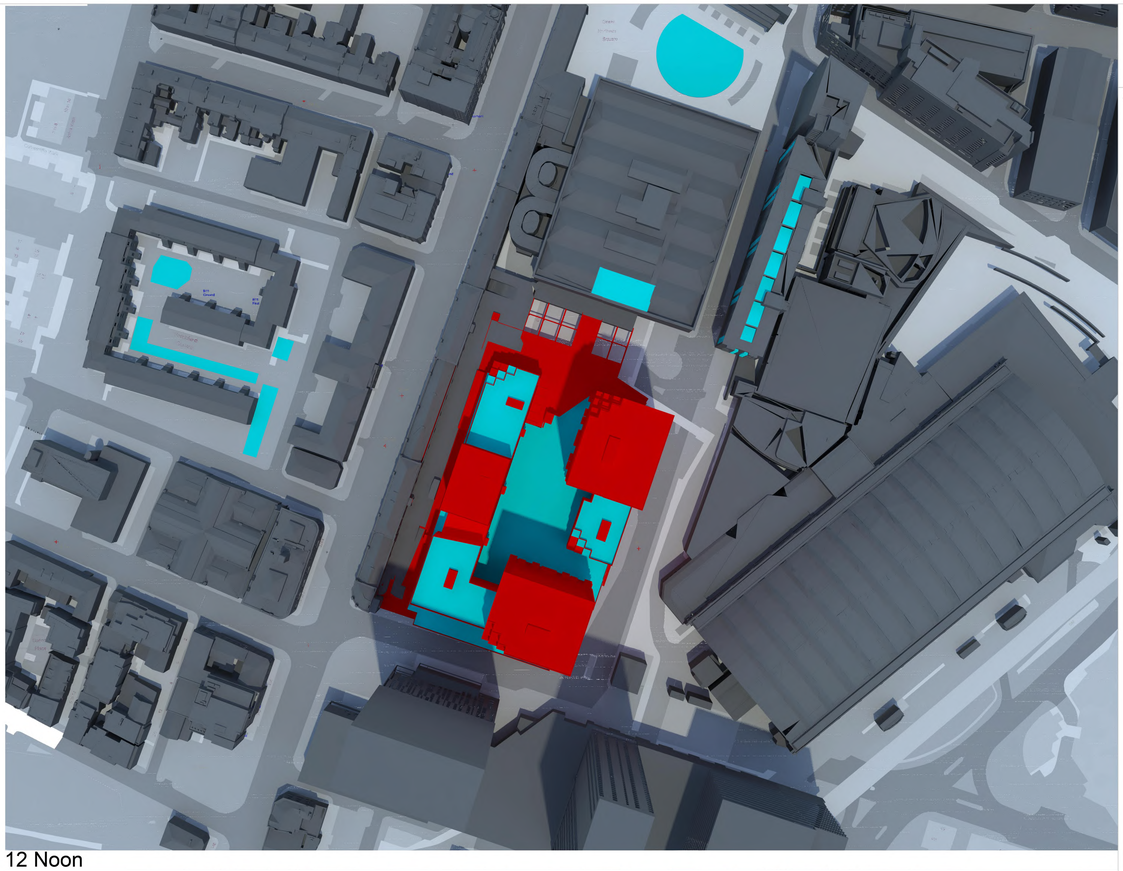
| Client | Drawing Title |
|---|---|
| Tobermory SARL | Overshadowing Images December 21 |

| Project Title | Drawn | Date |
|---|---|---|
| Leisurebox Great Northern Manchester | MA | 08/22 |
| | Checked: PT | Date: 08/22 |

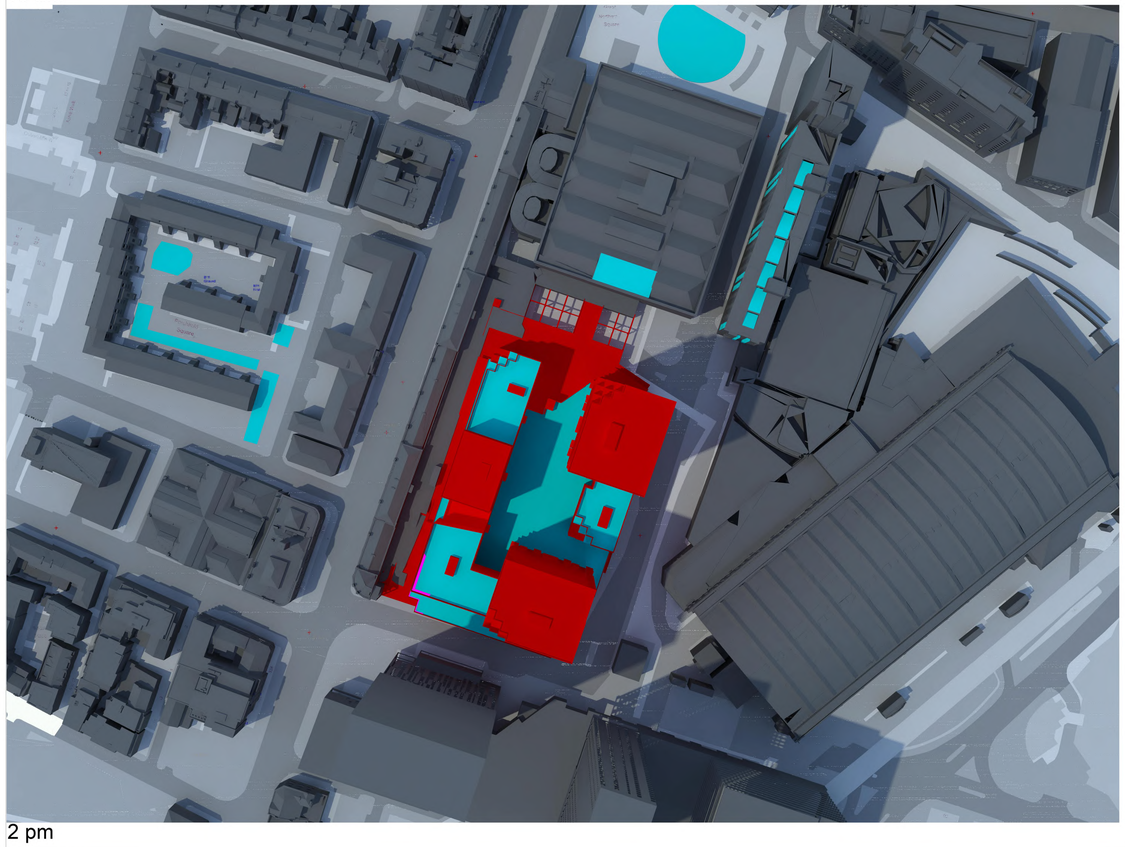
A0 | DWG No | Scale: NTS | Revision



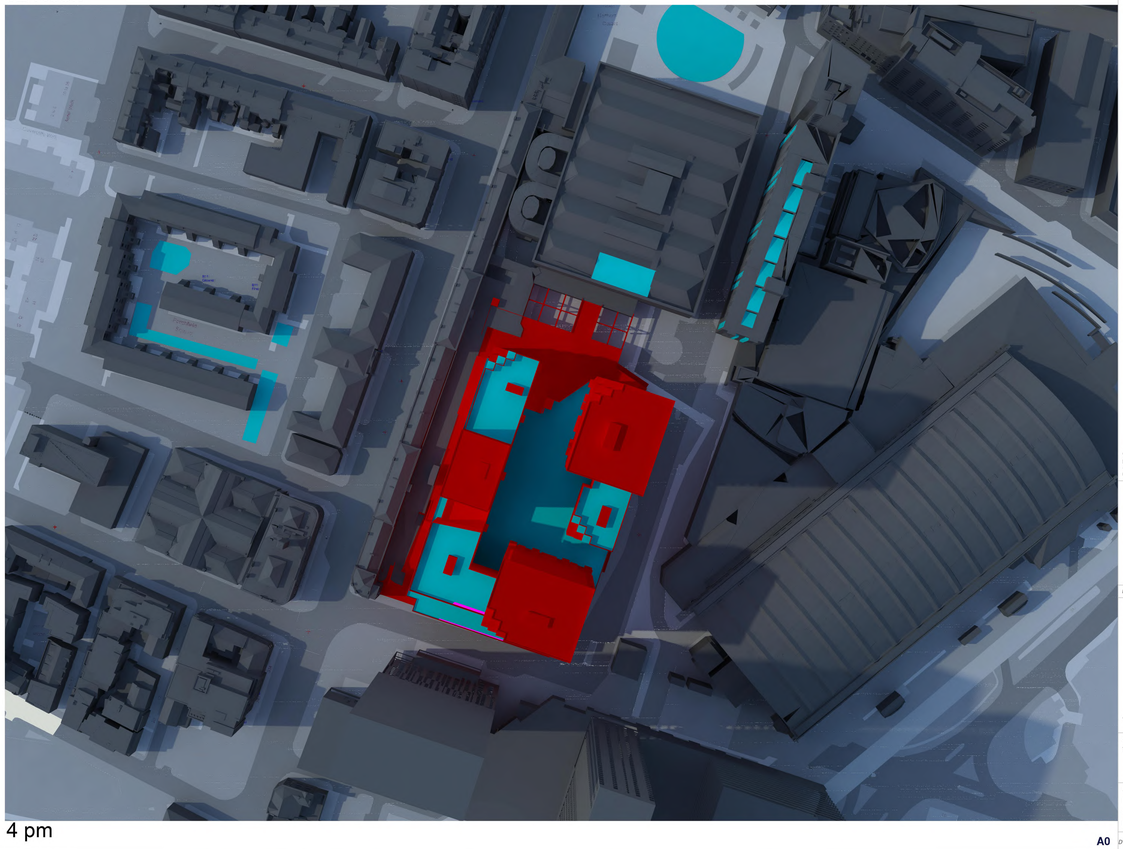
10 am



12 Noon



2 pm



4 pm

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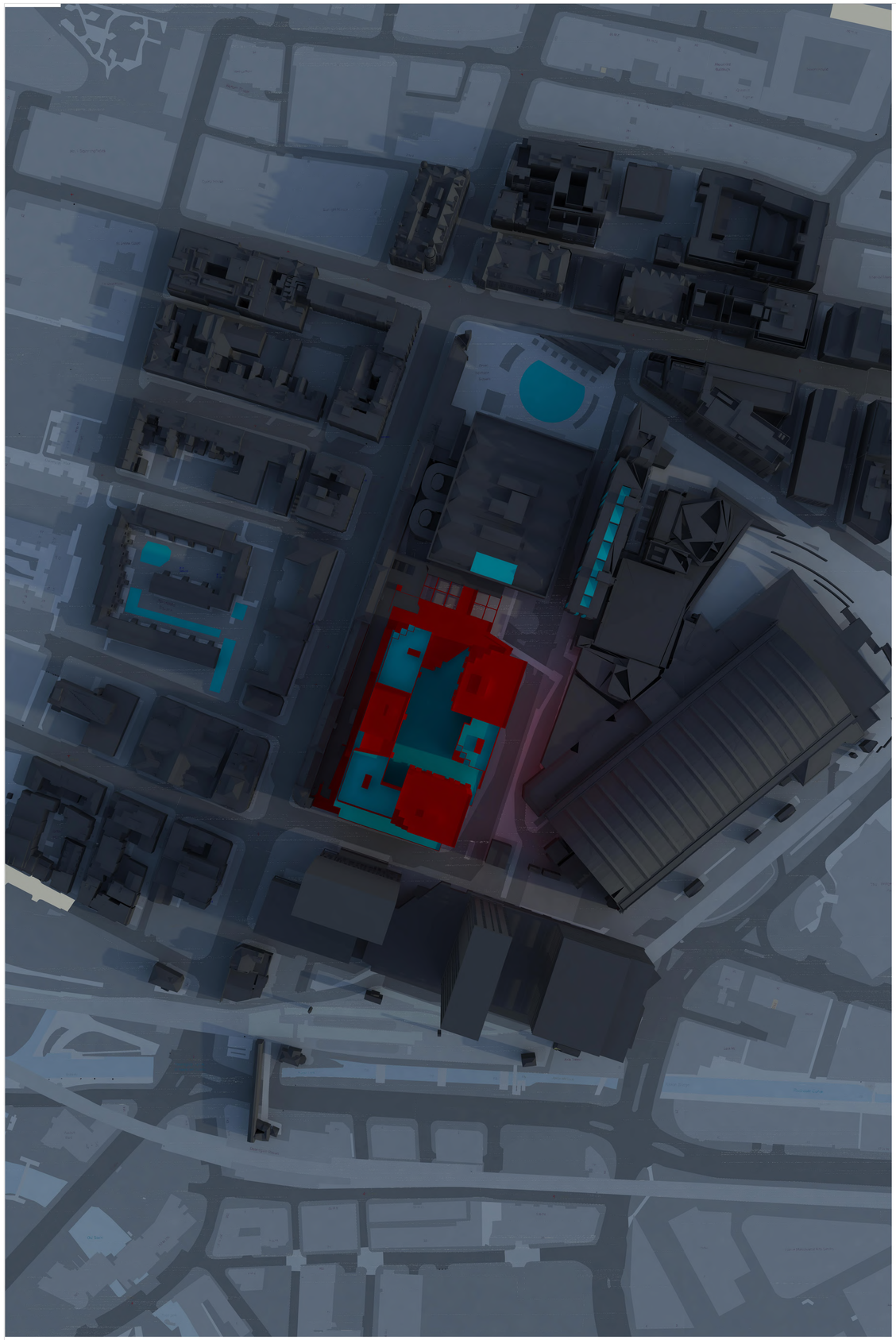
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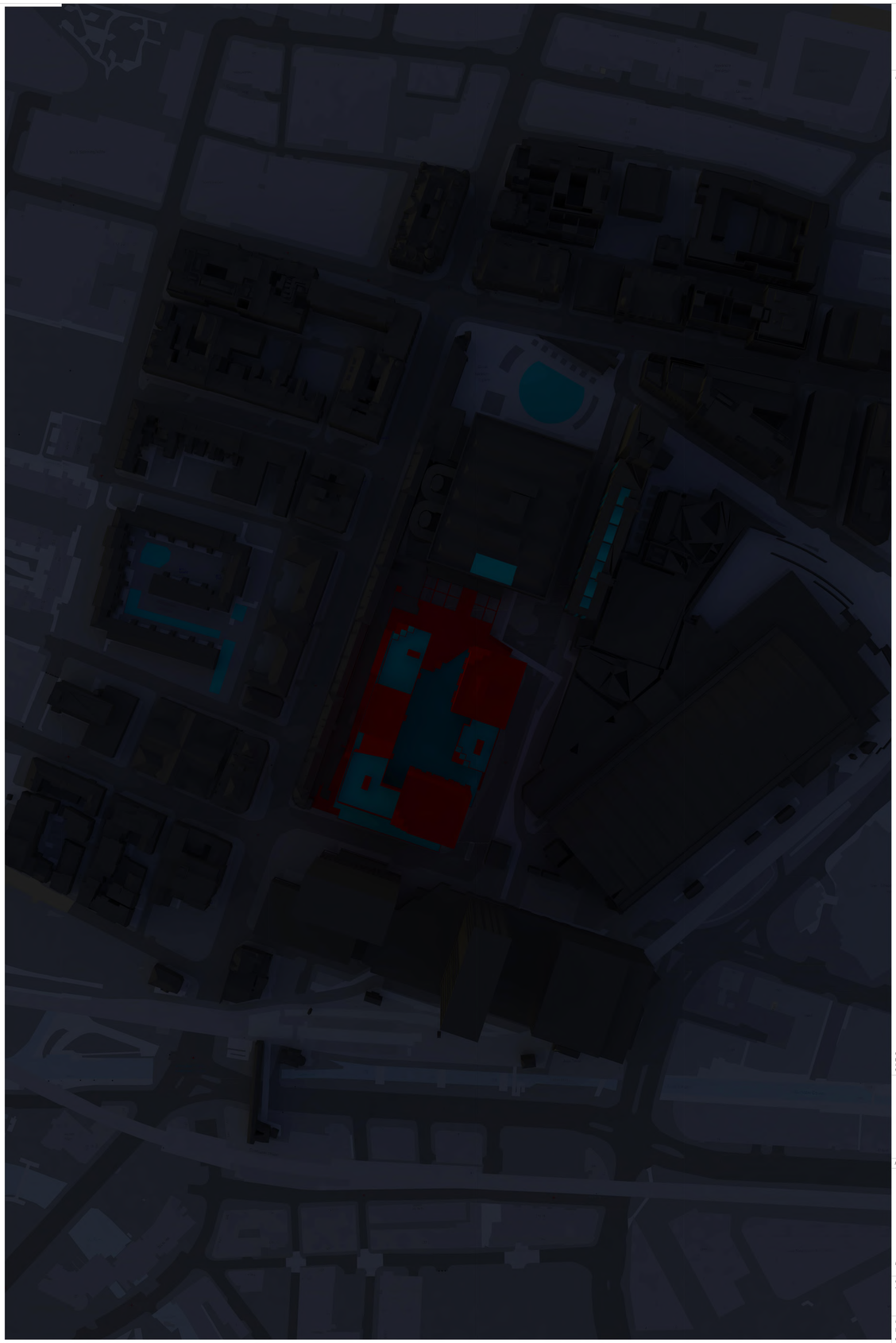
| Client | Drawing Title |
|---|---|
| Tobermory SARL | Overshadowing Images<br>June 21 |

| Project Title | Drawn | Date |
|---|---|---|
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| | Checked<br>PT | Date<br>08/22 |

A0 | DWG No. | Scale NTS | Revision



8 am



6 pm

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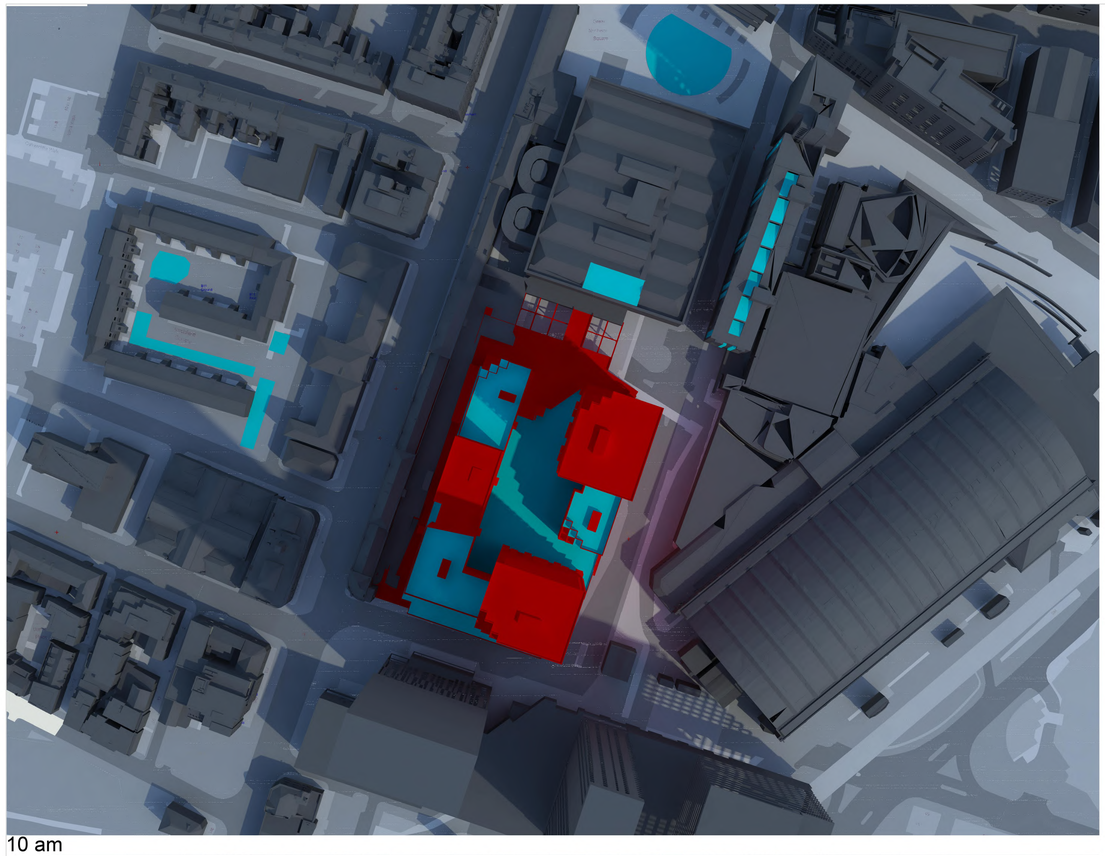
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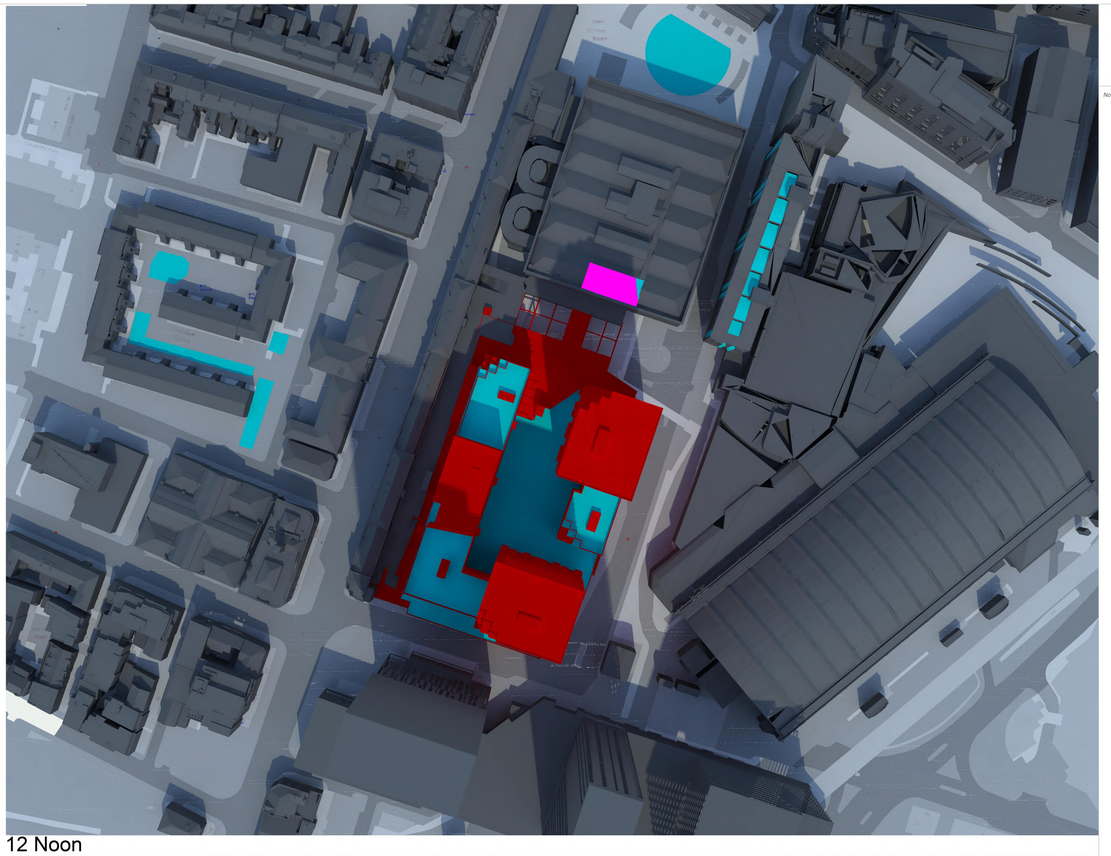
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| | |
|---|---|
| *Client* Tobermory SARL | *Drawing Title* Overshadowing Images March 21 8am & 6pm |
| *Project Title* Leisurebox Great Northern Manchester | *Drawn* MA / *Date* 08/22 |
| | *Checked* PT / *Date* 08/22 |

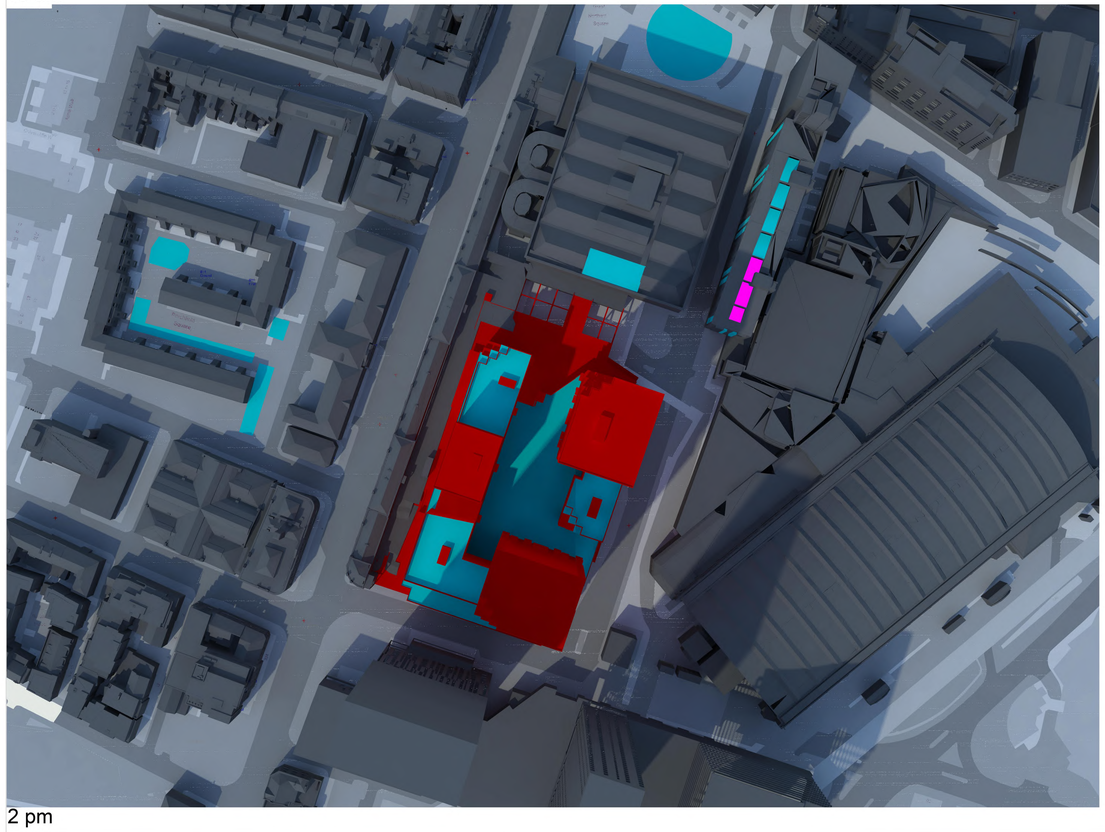
**A0** *DWG No.* | *Scale* NTS | *Revision*



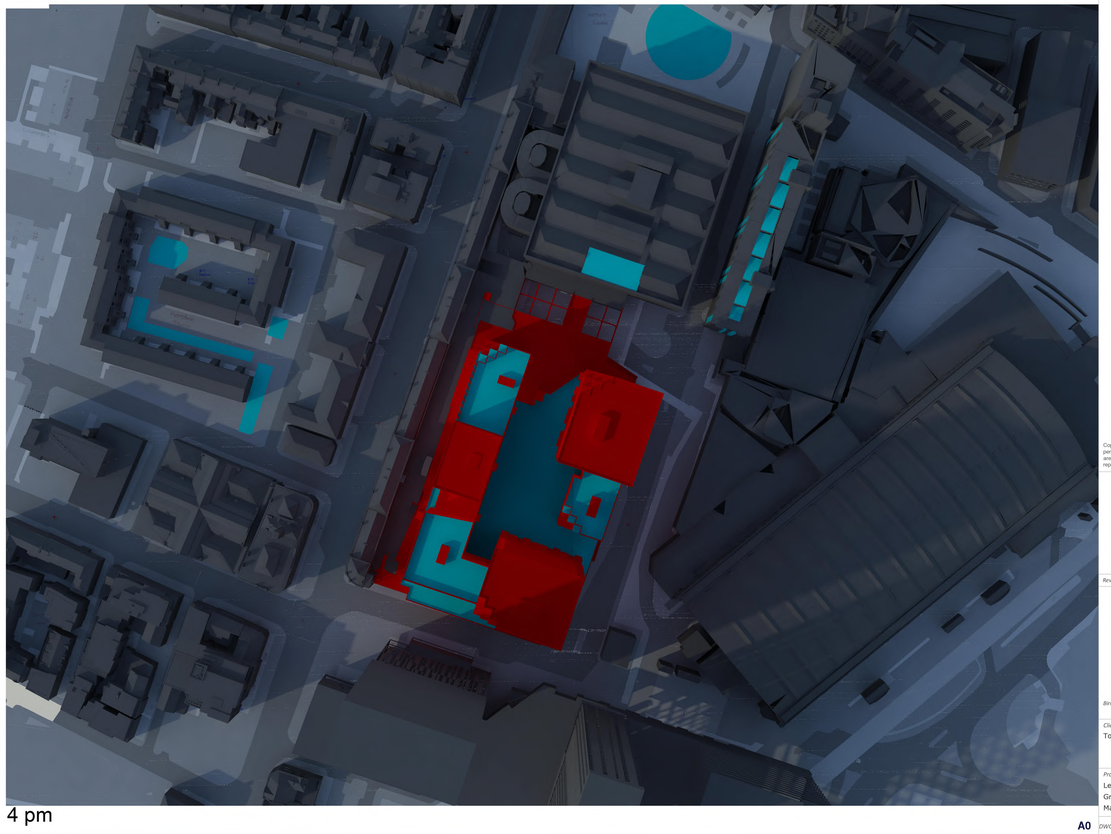
10 am



12 Noon



2 pm



4 pm

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|---|---|
| Tobermory SARL | Overshadowing Images March 21 |

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|---|---|---|
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| | Checked PT | Date 08/22 |
| A0 DWG No. | Scale NTS | Revision |