

## Summary Note

1<sup>st</sup> July 2022

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### Avonmouth House – Daylight and Sunlight in relation to revised BRE Guidance

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#### Introduction

- 1.1. We previously provided a Daylight, Sunlight and Overshadowing report in relation to the Proposed Scheme for the redevelopment of Avonmouth House.
- 1.2. This considered the effects of the Proposed Scheme on the properties neighbouring the site, the provision of daylight amenity within the proposed residential accommodation, and the overshadowing effects on Newington Gardens.
- 1.3. It is usual to assess daylight and sunlight 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'. This document is most widely accepted by planning authorities as the means by which to judge the acceptability of a scheme.
- 1.4. Subsequent to providing our report, a new version of the BRE Report (published in June 2022) has replaced the previous version which was published in 2011.
- 1.5. The methodology for the assessment of the impact of proposed schemes on neighbouring properties has not materially altered, and likewise the overshadowing assessment methodology has not changed.
- 1.6. Therefore, application of the guidance as set out in the recently published update of the BRE Report would not affect any conclusions drawn in relation to our assessment of the effects of the Proposed Scheme on the surrounding properties.
- 1.7. However, the methodology for the assessment of daylight within new developments is radically different. Here a new Climate Based Daylight Modelling (CBDM) methodology replaces the old Average Daylight Factor (ADF) methodology. The new methodology is more complex and is a more accurate simulation of actual daylight levels. However, it has targets that are generally more difficult to achieve in an urban context.

#### Climate Based Daylight Modelling (CBDM) - Daylight Illuminance (DI)

- 1.8. The new CBDM methodology is based on the British Standard 'Daylight in Buildings' (BS EN17037). This contains advice and guidance on interior daylighting for all buildings across

Europe, but also has a UK National Annex which provides suggested targets for dwellings in the UK.

- 1.9. BS EN17037 supersedes BS 8206 Part 2 which was based on Average Daylight Factor (ADF) and is no longer recommended.
- 1.10. The CBDM methodology is based on target illuminances from daylight, to be achieved over half the area of the room (measured on a reference plane at tabletop level) for at least half of the daylight hours in a typical year. The calculations are based on weather data files which cover different regions of the UK. The calculations are done for each hour of the day for every day of the year. There are 8760 hours in the year, of which 4380 are daylight hours, and therefore the targets should be achieved for 2190 hours in the year. The methodology uses a more accurate sky model which simulates the movement of the sun throughout the day and accounts for the weather conditions at the time. As a result, CBDM accounts for the presence of sunlight and therefore the orientation of the rooms/windows is accounted for. A south facing room is likely to have access to higher levels of natural light than a north facing room and as a result, in order to comply a north facing room would typically need larger windows.
- 1.11. The UK National Annex gives illuminance recommendations of 100 Lux in bedrooms, 150 Lux in living rooms and 200 Lux in kitchens. These are median illuminances to be achieved over 50% of the assessment grid for at least half of the daylight hours.

#### **CBDM DI Assessment of Proposed Accommodation**

- 1.12. While our previous assessment of internal daylight levels (as measured by ADF) concluded that overall amenity internally would be very good, for completeness we have undertaken a CBDM DI assessment.
- 1.13. We have assessed the lowest 2 floors containing residential accommodation (levels 2 and 3). Naturally, daylight levels will improve going up the building.
- 1.14. The results of the assessment are shown on attached drawings P2747/BANDS/01 & 02. These show that 48 (92%) of the 52 rooms assessed will achieve their respective target illuminance over at least 50% of their room area, with the vast majority of these achieving significantly more than the required levels.
- 1.15. We consider that all rooms above level 3 will achieve the new CBDM DI targets, and therefore the overall compliance rate for the scheme as a whole will be over 98%. This is an excellent level of compliance with the new internal daylight targets.

#### **Summary**

- 1.16. In summary, the methodology for the assessment of the impact of proposed schemes on neighbouring properties provided in the recently published update of the BRE Report has not materially altered from the previous version. Therefore, in relation to our assessment of the effects of the Proposed Scheme on the surrounding properties, the conclusions of our previous report remain.
- 1.17. As the assessment methodology in relation to internal daylight has altered, we have undertaken an assessment in relation to this new guidance. Levels of compliance with the new

CBDM DI targets are excellent, and again we conclude that overall daylight amenity within the proposed scheme will be very good.

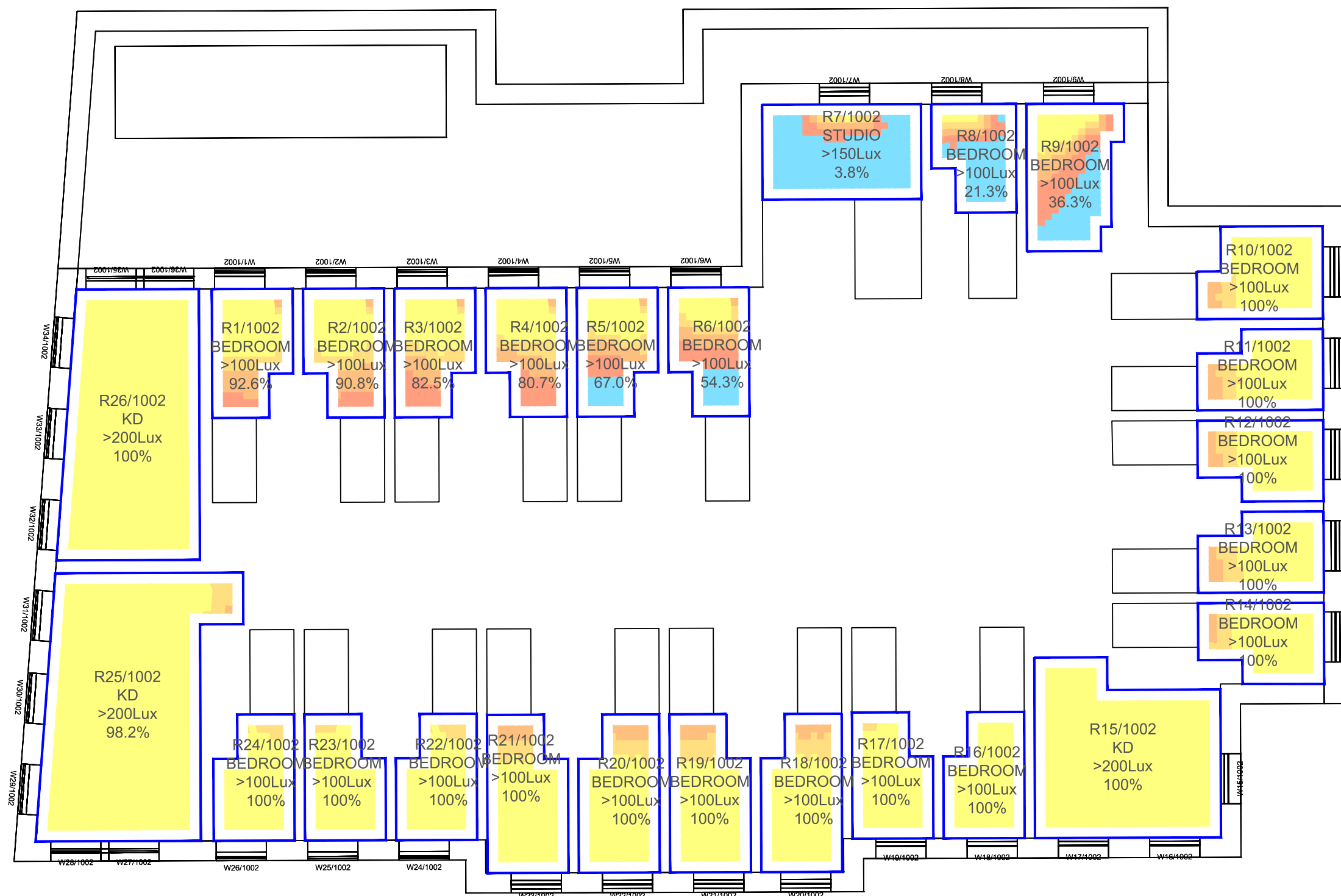
1.18. I trust that this provides the required summary.

Yours Sincerely

A handwritten signature in dark blue ink, reading "Tom Bevan". The signature is written in a cursive style with a large, stylized 'T' and 'B'.

Tom Bevan

For and on behalf of Point 2 Surveyors Ltd



**Sources:** LRM Survey Services  
2D Survey (received 07/06/21)  
Avonmouth House, 6 Avonmouth Street, SE1 6NX - Topographical Survey.dwg

Stitch Architects  
Proposed Scheme 3D Model (received 13/07/21)  
210712-Massing.skp  
Proposed Scheme 3D Model (received 07/09/21)  
210907-AvonmouthModel.skp  
21235-STCH-XX-ZZ-DR-A-0200-0203.pdf  
21235-STCH-SK-50-Geolocation.pdf  
Proposed Scheme 2D Data (received 09/09/21)  
21235-STCH-XX-ZZ-DR-A-0103-Level 02.dwg  
21235-STCH-XX-ZZ-DR-A-0300-Proposed building - Section AA.dwg  
21235-STCH-XX-ZZ-DR-A-0201-Proposed building - East elevation.dwg

**Key:** Daylight Illuminance  
(achieved for 50% over daylight hours)

>200 Lux

>150 Lux

>100 Lux

>50 Lux

<50 Lux

**Scheme Confirmed:** -

**Date:** -

**Project:** Avonmouth House

**Drawn By:** AG

**Scale:** 1:125 @ A3

**Date:** June 22

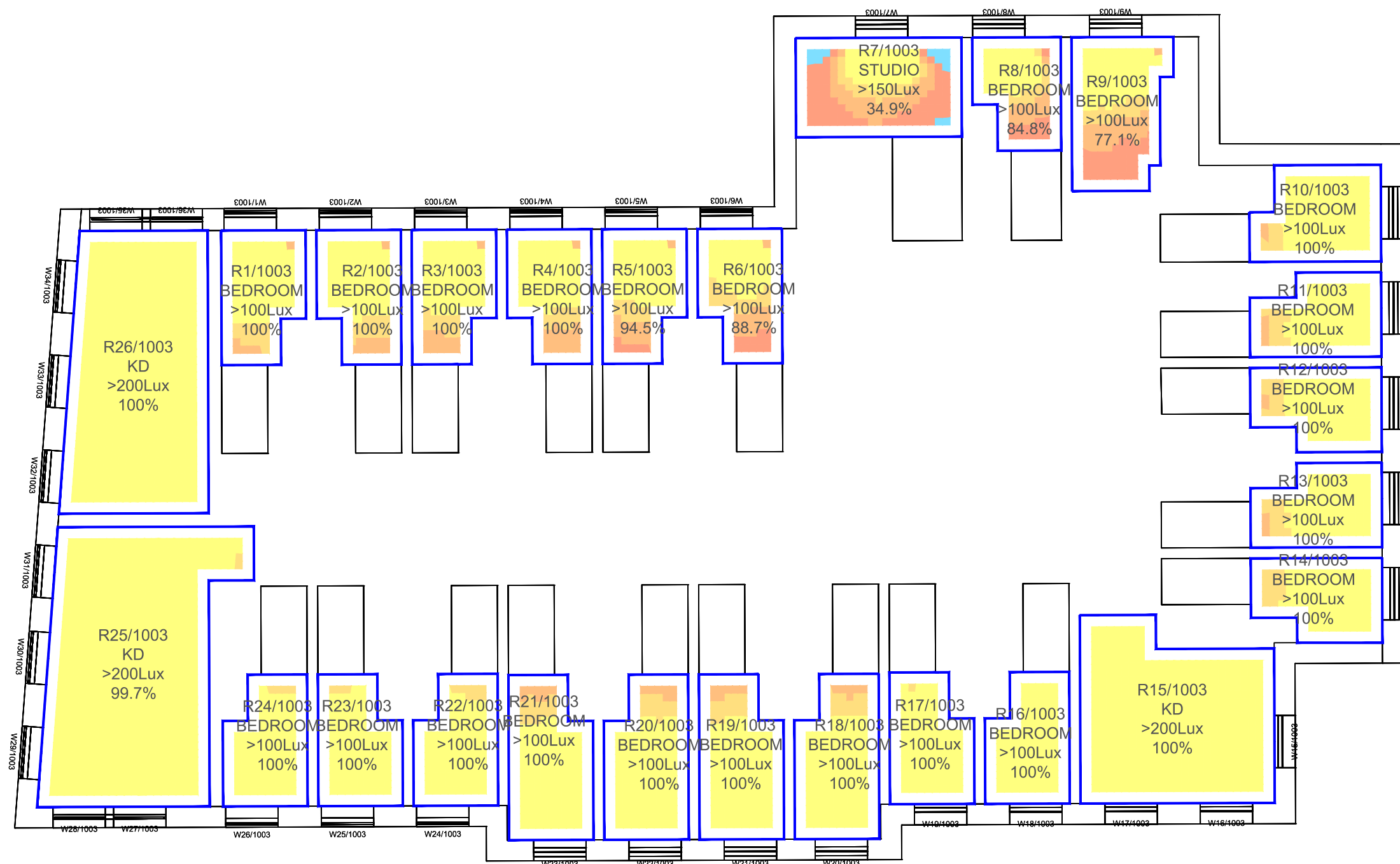
**Title:** CBDM Assessment - Daylight Illuminance  
Proposed Scheme 07/09/21  
Second Floor

Threshold - Bands

**Dwg No:** P2747/BANDS/01

**Rel:** 10





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AG

1:125 @ A3

June 22

**Title:** CBDM Assessment - Daylight Illuminance  
Proposed Scheme 07/09/21  
Third Floor

Threshold - Bands

Dwg No:

Rel:

P2747/BANDS/02

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