



**ADDENDUM
DAYLIGHT & SUNLIGHT
REPORT**

**IMPACT ON NEIGHBOURING
PROPERTIES**

Phoenix Works, Manchester

10 February 2021

GIA No: 1344

PROJECT DATA:

Client **DeTrafford Estates Limited**
Architect **CW Architects**
Project Title **Phoenix Works, Manchester**
Project Number **1344**

REPORT DATA:

Report Title **Impact on Neighbouring Properties**
GIA Department **Daylight & Sunlight**
Dated **10 February 2021**
Prepared by **SW**
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Revisions	No:	Date:	Notes:	Signed:

1.0 Executive Summary

This addendum daylight and sunlight report has been produced following feedback from Manchester City Council on 09 February 2021. A more detailed breakdown of the daylight and sunlight impacts to Britannia Mills alongside a clearer narrative on the type, sensitivity and magnitude of the impact on surrounding development was requested. We have also provided colour coded renders of Britannia Mills indicating which windows will not meet the VSC targets, and their magnitude of failure according to the percentages set out below.

The following table provides a summary of the criteria set out within the BRE Guidelines for daylight and sunlight.

Method	BRE Criteria
VSC	A window may be adversely affected if its VSC measured at the centre of the window is less than 27% and less than 0.8 times its former value.
NSL	A room may be adversely affected if the daylight distribution (NSL) is reduced beyond 0.8 times its existing area.
APSH	A window may be adversely affected if a point at the centre of the window receives for the whole year, less than 25% of the APSH including at least 5% of the APSH during the winter months (21 September to 21 March) and less than 0.8 times its former sunlight hours during either period, and for existing neighbouring buildings, if there is a reduction in total APSH which is greater than 4%.

The initial numerical criteria for determining the magnitude of effect is based on percentage alterations, as follows:

Magnitude of Effect	Percentage Alteration
Negligible	0-20%
Minor	20-29.9%
Moderate	30-39.9%
Major	40%+

As requested, we have provided a more detailed breakdown of the results to Britannia Mill. The results are summarised in the tables below:

Address	VSC Daylight				
	Below BRE Guidelines				
	Total No. of Windows	No. of Windows that meet BRE	Minor	Moderate	Major
Britannia Mills	172	125	8	6	33

Address	NSL Daylight				
	Below BRE Guidelines				
	Total No. of Rooms	No. of Rooms That Meet BRE	Minor	Moderate	Major
Britannia Mills	103	97	2	1	3

Address	APSH Sunlight				
	Below threshold for Total APSH				
	Total No. of Rooms	No. of Rooms That Meet BRE	Minor	Moderate	Major
Britannia Mills	93	82	2	3	6

It is important that the location and nature of the development site and surrounding is considered when determining the significance of any impacts identified. The BRE Guide is very clear that the targets provided are not mandatory. The location of the development could be deemed to be special circumstances in which the planning authority may wish to use different target values. This scope and view should also be followed through to the sensitivity of the surrounding receptors. There should be an expectation that a higher degree of obstruction is inevitable in an area with modern high-rise buildings.

For these reasons, the surrounding receptors may have a lower sensitivity to change in an urban location than those located in sub-urban, less dense areas. Sensitivity classification is assigned on how the proposed receptor is able to accommodate or adapt to the effect of the development. The existing residential receptors surrounding the development site reside in a city centre location where there is an expectation for a higher density of development, these receptors are therefore deemed to have a medium sensitivity.

The significance of any identified environmental effects is determined by the assessment of their magnitude against their sensitivity.

For daylight and sunlight, the BRE Guidelines outline the approach within the accompanying Appendix I, in terms of assigning criteria to assess the effects:

"Adverse impacts occur when there is a significant decrease in the amount of skylight and sunlight reaching an existing building where it is required...The assessment of impact will depend on a combination of factors, and there is no simple rule of thumb that can be applied."

"Where the loss of skylight or sunlight fully meets the guidelines, the impact is assessed as negligible or minor adverse. Where the loss of light is well within the guidelines, or only a small number of windows or limited area of open space lose light (within the guidelines), a classification of negligible impact is more appropriate. Where the loss of light is only just within the guidelines and a larger number of windows or open space are affected, a minor adverse impact would be more appropriate, especially if there is a particularly strong requirement for daylight and sunlight in the affected building or open space."

"Where the loss of skylight or sunlight does not meet the guidelines in this book, the impact is assessed as minor, moderate or major adverse. Factors tending towards a minor adverse impact include:

- Only a small number of windows are affected;*
- The loss of light is only marginally outside the guidelines;*
- An affected room has other sources of skylight or sunlight; and*
- The affected building only has a low level of requirement for skylight or sunlight."*

The classification of major adverse is documented within Paragraph 7 of the BRE Guidelines:

"Factors tending towards a major adverse impact include:

- a large number of windows are affected;*
- the loss of light is substantially outside the guidelines;*
- all the windows in a particular property are affected; and*
- the affected indoor spaces have a particular strong requirement for skylight or sunlight, e.g. a living room in a dwelling".*

Beneficial impacts occur when there is a significant increase in the amount of skylight and sunlight reaching an existing building. Beneficial impacts should be worked out on the same principals as adverse impacts."

The BRE Guidelines do not provide any Guidance on what constitutes a moderate adverse impact.

When assigning significance criteria for daylight and sunlight effects, professional judgement has been used. Consideration has been given to the proportion of rooms/windows affected, as well as the percentage alterations, absolute changes, retained daylight and sunlight levels, sensitivity of the receptor, and any other relevant factors, such as there may be mitigating factors including location and nature of the development, balconies, overhangs or design features which may also affect the determination of assigning the criteria.

Whilst the number of windows with reductions in excess of 40% to Britannia Mills suggest a major adverse impact, we consider that the impact is moderate for the following reasons:

- Overall, only limited windows are affected to Britannia Mills i.e. not all the windows to the property are affected;
- The single aspect deep floor plates make it difficult for daylight to penetrate to the back of the rooms. This is evidenced by the fact that only 78% of the windows meet the NSL targets in the existing scenario;
- The retained VSC levels at Britannia Mills along Ellesmere Street will average at 19.9% with the proposed development in place (23.2% in the existing baseline), which is in line with, or in excess of other retained levels in the immediate surrounding area. This is evidenced in the table below in the contextual analysis;
- The lower levels, where the most impact is potentially suffered, are in part dual aspect i.e. an affected room has other sources of skylight; and
- 97% of the rooms will meet the ADF targets with the proposed development in place.

Contextual Analysis

It is well established that the published targets within the BRE Guide are based on low rise, sub-urban development. The National Planning Practice Guidance (NPPG) – Making Efficient Use of Land published on 29 November 2016, updated 01 October 2019, Paragraph 007 Reference ID: 66-007-20190722 states:

“All developments should maintain acceptable living standards. What this means in practice, in relation to assessing appropriate levels of sunlight and daylight, will depend to some extent on the context for the development as well as its detailed design. For example, in areas of high-density historic buildings, or city centre locations where tall modern buildings predominate, lower daylight and sunlight levels at some windows may be unavoidable if new developments are to be in keeping with the general form of their surroundings.”

The images below illustrate the streetscapes and built form of some of London’s most typical and highly valued locations. Whilst not Manchester, they demonstrate that these buildings would not be permitted today in planning terms if BRE’s daylight and sunlight guidance were stringently applied. In a similar vein, it would be difficult to reproduce such built form in new developments given the common interpretation of BRE guidance.

The first image of each pair shows the existing street, and the second of the pair shows the extent of development that would have been permitted, in order to comply with the published BRE targets.

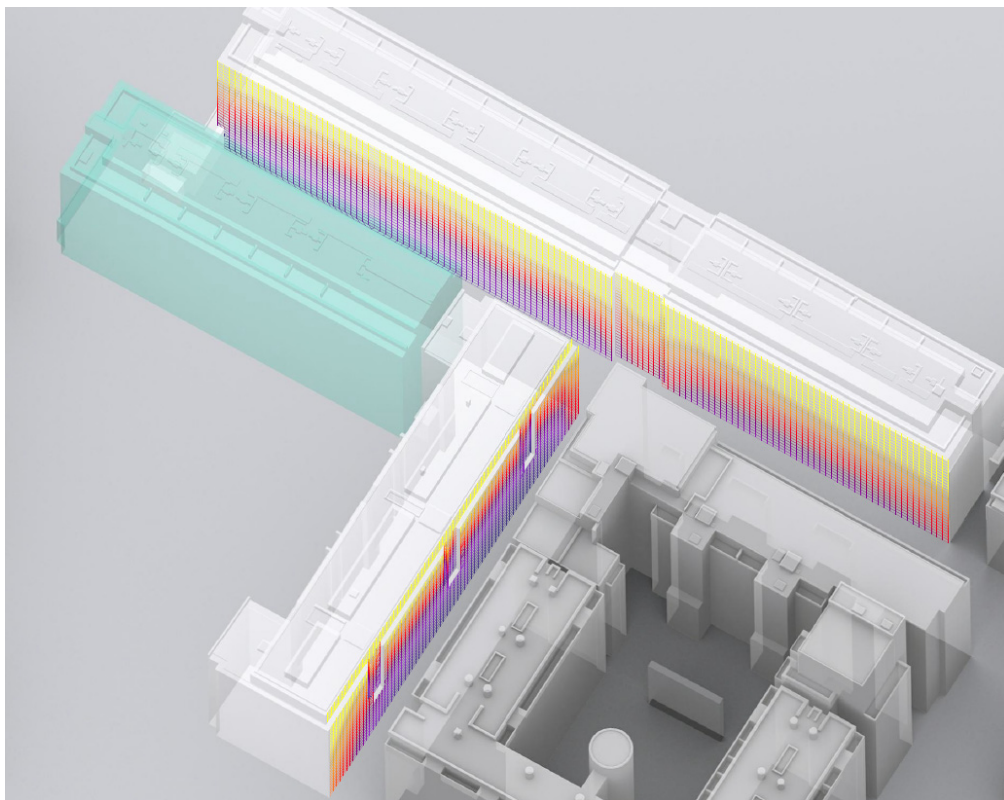


The BRE recognised this problem in the initial 1992 Guide and, in a 2011 revision of the Guide, included Appendix F – Setting Alternative Values for Skylight and Sunlight Access. Paragraph F1 of the appendix states: *“Sections 2.1, 2.2 and 2.3 give numerical target values in assessing how much light from the sky is blocked by obstructing buildings. These values are purely advisory and different targets may be used based on the special requirements of the proposed development or its location. Such alternative targets may be generated from the layout dimensions of existing development, or they may be derived from considering the internal layout and daylighting needs of the proposed development itself.”*

GIA have previously researched the retained VSC daylight levels in established, successful residential areas in the city centre of Manchester and Salford. These have been detailed below. The streets chosen all include successful residential buildings and are recognised as positive urban environments that people choose to live in. The average VSC levels were calculated using either detailed VSC analyses, or VSC façade renders, which calculate the VSC levels across the whole facades. Only the elevations that closely interface with adjacent development have been considered. It is implied that the other elevations in these buildings will achieve significantly better daylight levels.

NSL daylight is dependent on the room layout, and so we have not been able to undertake the same detailed analysis. APSH sunlight is influenced by orientation and so direct comparisons could not be achieved.

An example of how the analysis is undertaken is shown below, using the interface of the existing residential properties in Castlefield:

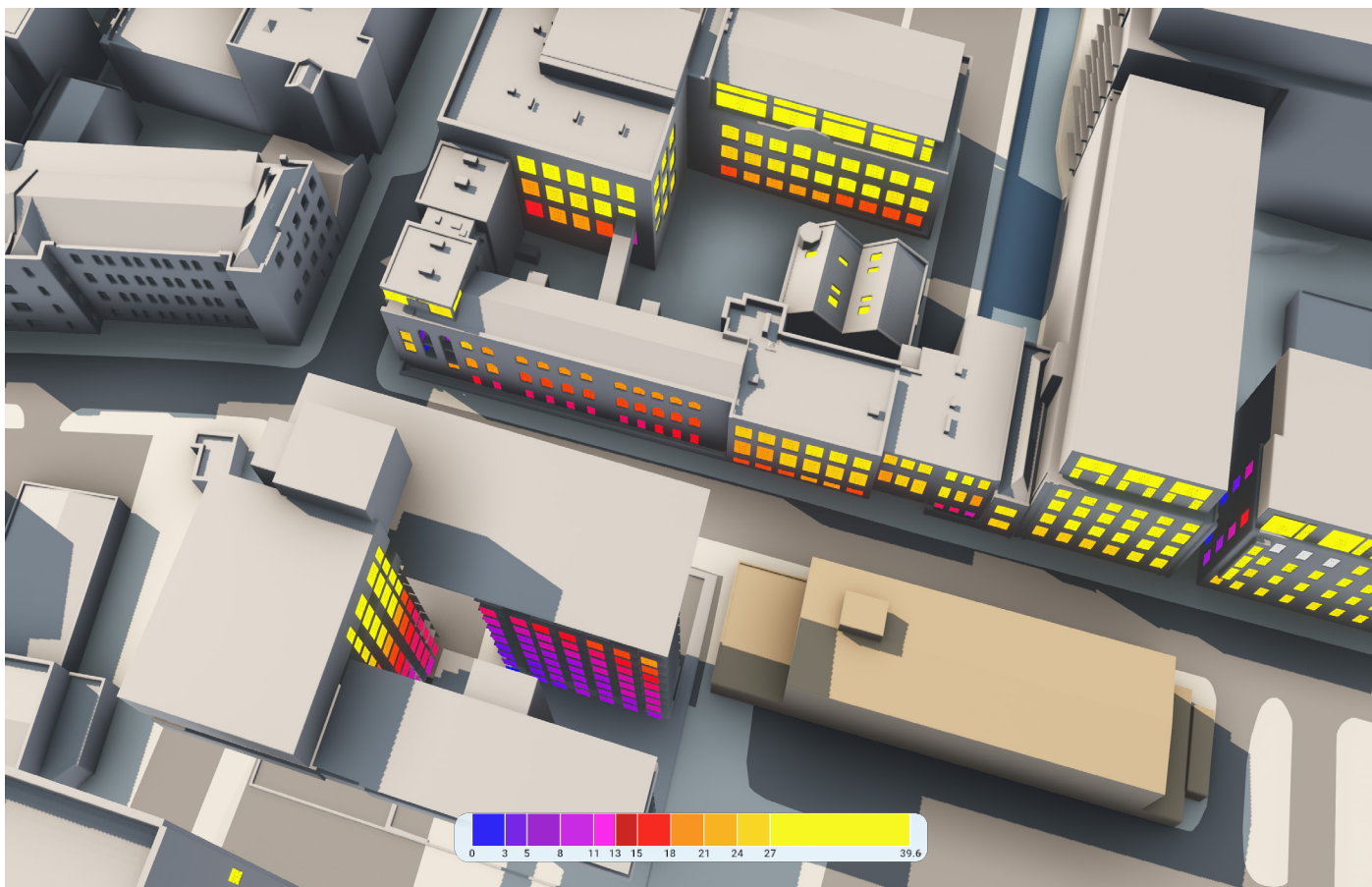


The results of our assessments are summarised in the table below:

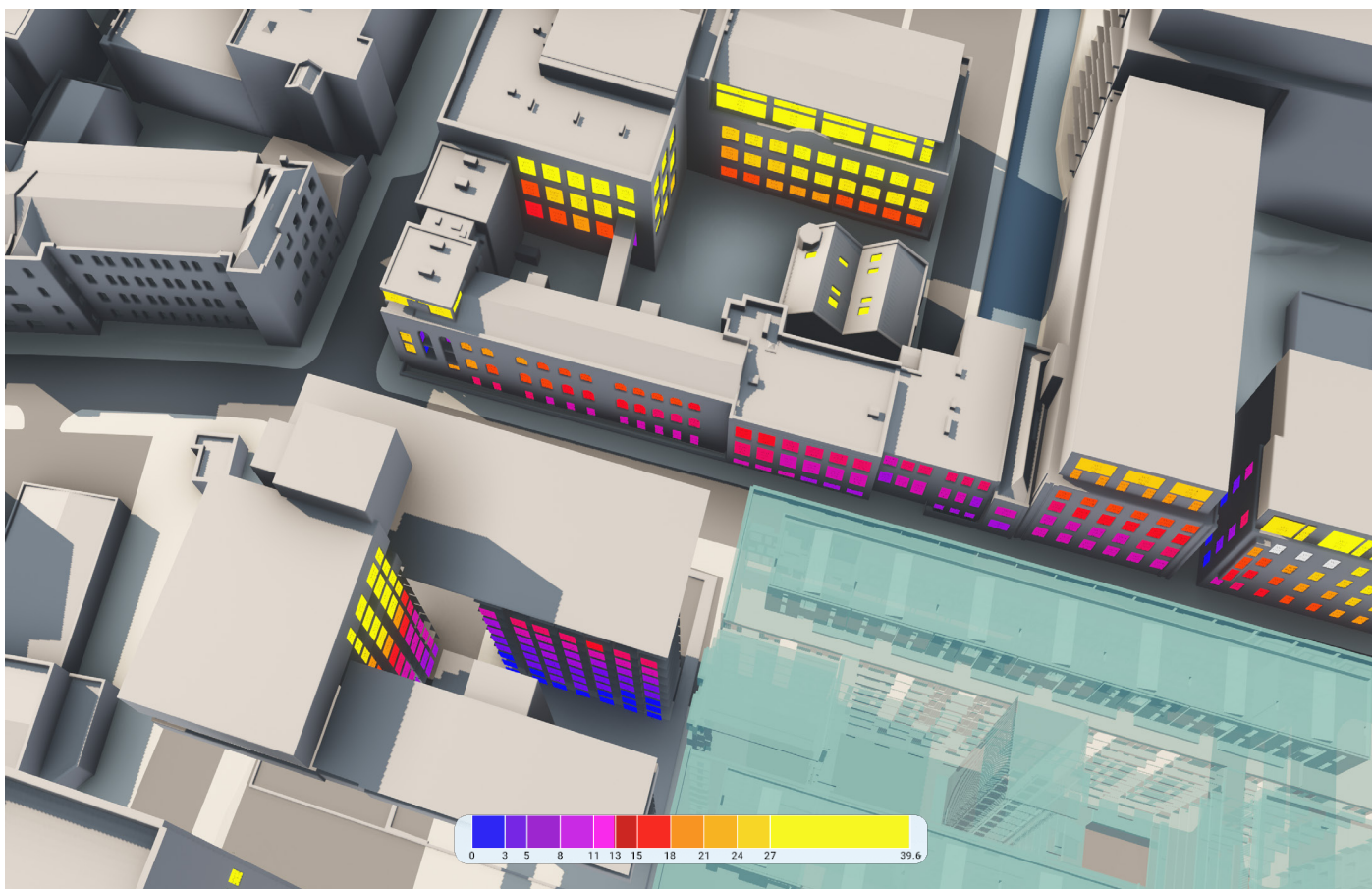
Address	Retained VSC Level
Boxworks, Castlefield, Manchester	5.1%
MoHo, Castlefield, Manchester	6.4%
Abito, Greengate, Salford	7.5%
Hill Quays, Great Jackson Street, Manchester	10%
Lockes Yard, Manchester	11%
Frank Street, McIntosh Village, Manchester	11%
Sorting Office, Greengate, Salford	12.4%
Lumiere, Great Jackson Street, Manchester	12.5%
Worsley Street/Burton Place, Castlefield	13.6%
One Greengate, Greengate, Salford	14.1%
Deansgate Quay, Great Jackson Street, Manchester	15.%
Britannia Mills	19.9%
Tempus Tower , Greengate, Salford	20%
Anaconda Cut, Greengate, Salford	21%
The Residence, Greengate, Salford	21%

The results of our wider contextual analysis demonstrate that the levels of daylight retained in Britannia Mills is comparable with other, established and successful city centre residential areas. The VSC levels have also been measured along Ellesmere Street, and levels to the internal courtyard facing elevations are likely to be significantly higher.

VSC Results

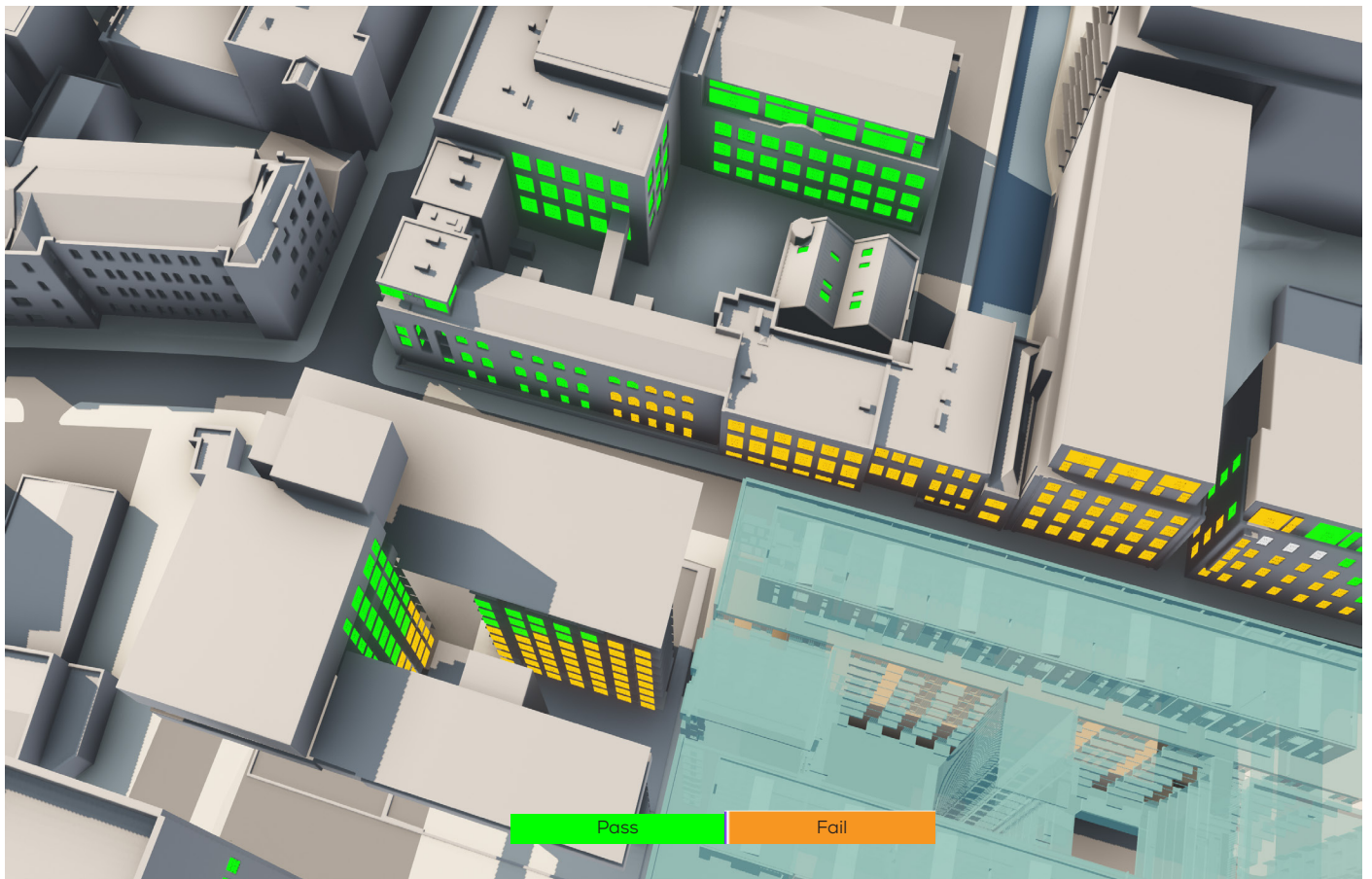


Existing VSC (%) Levels

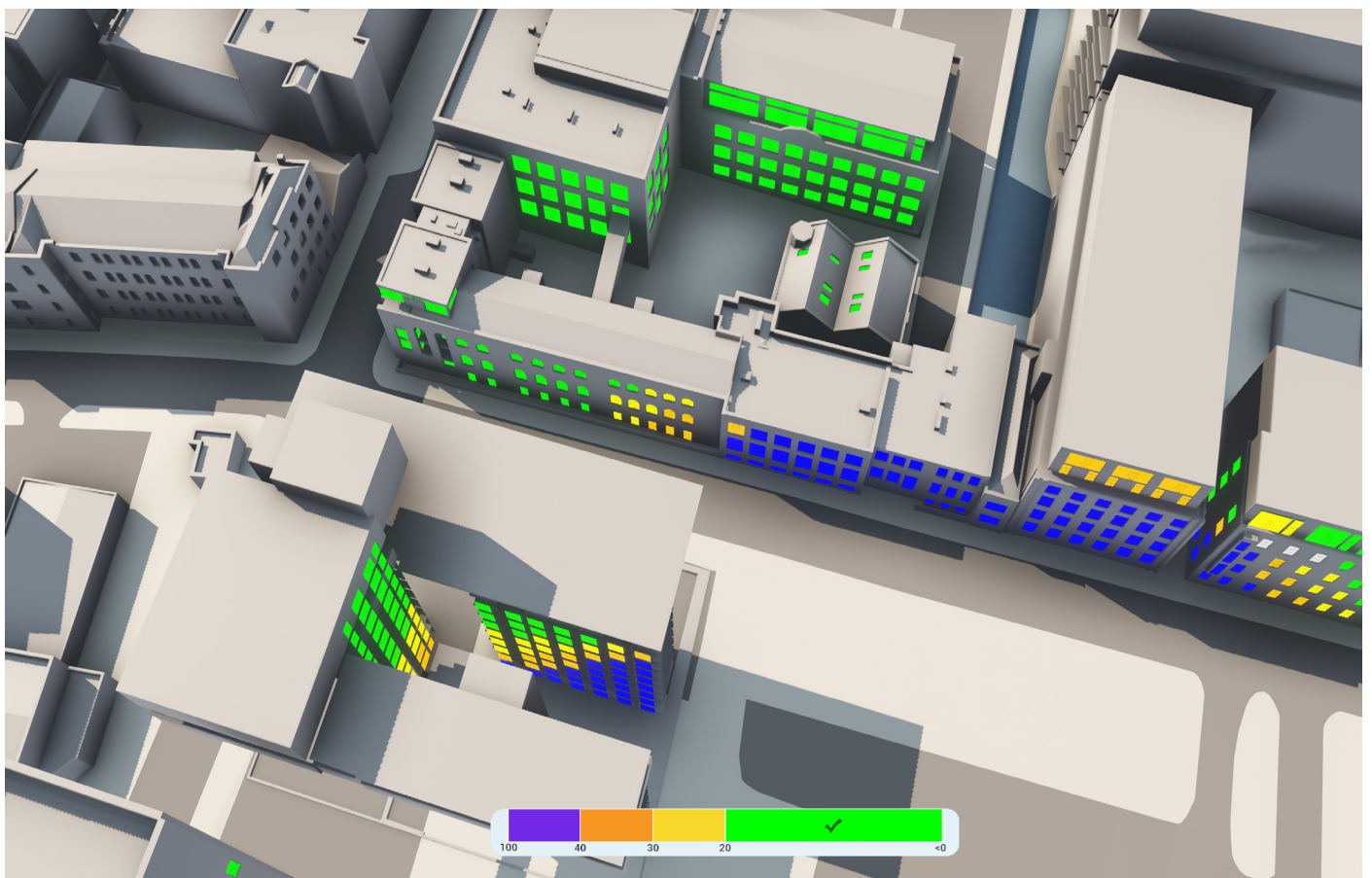


Proposed VSC (%) Levels

VSC Results

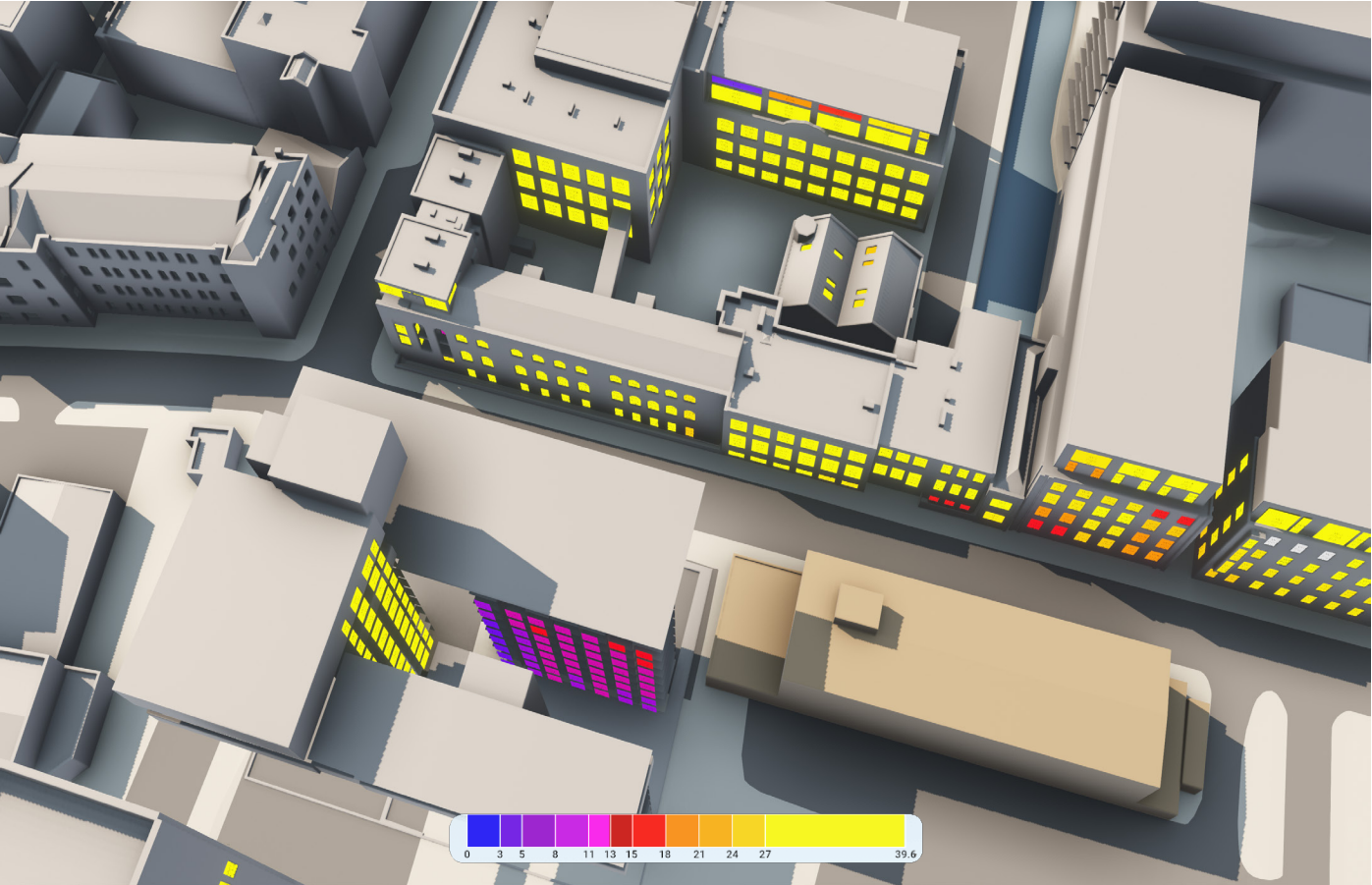


VSC Pass/Fail

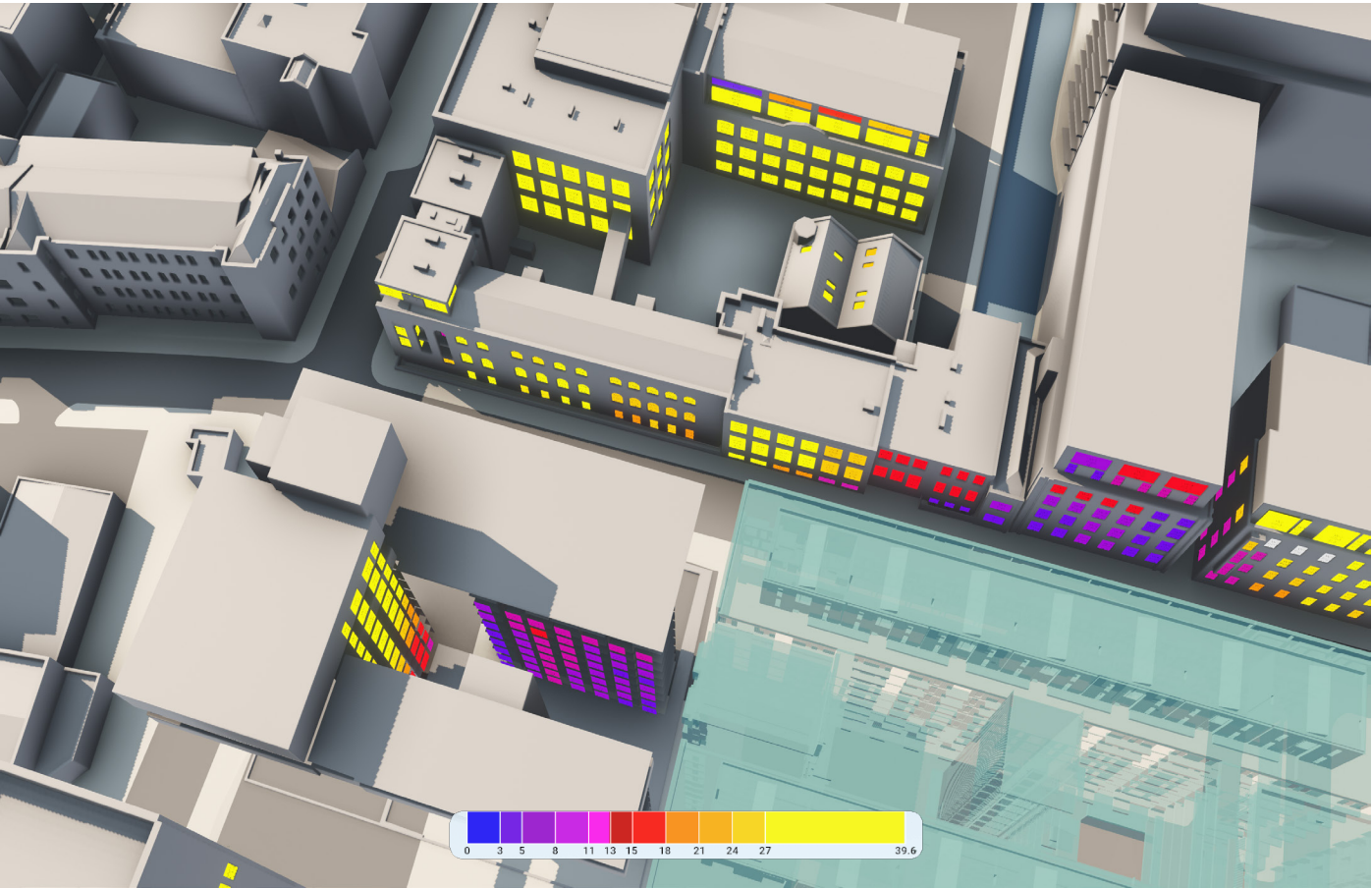


VSC (%) Reductions

NSL Results

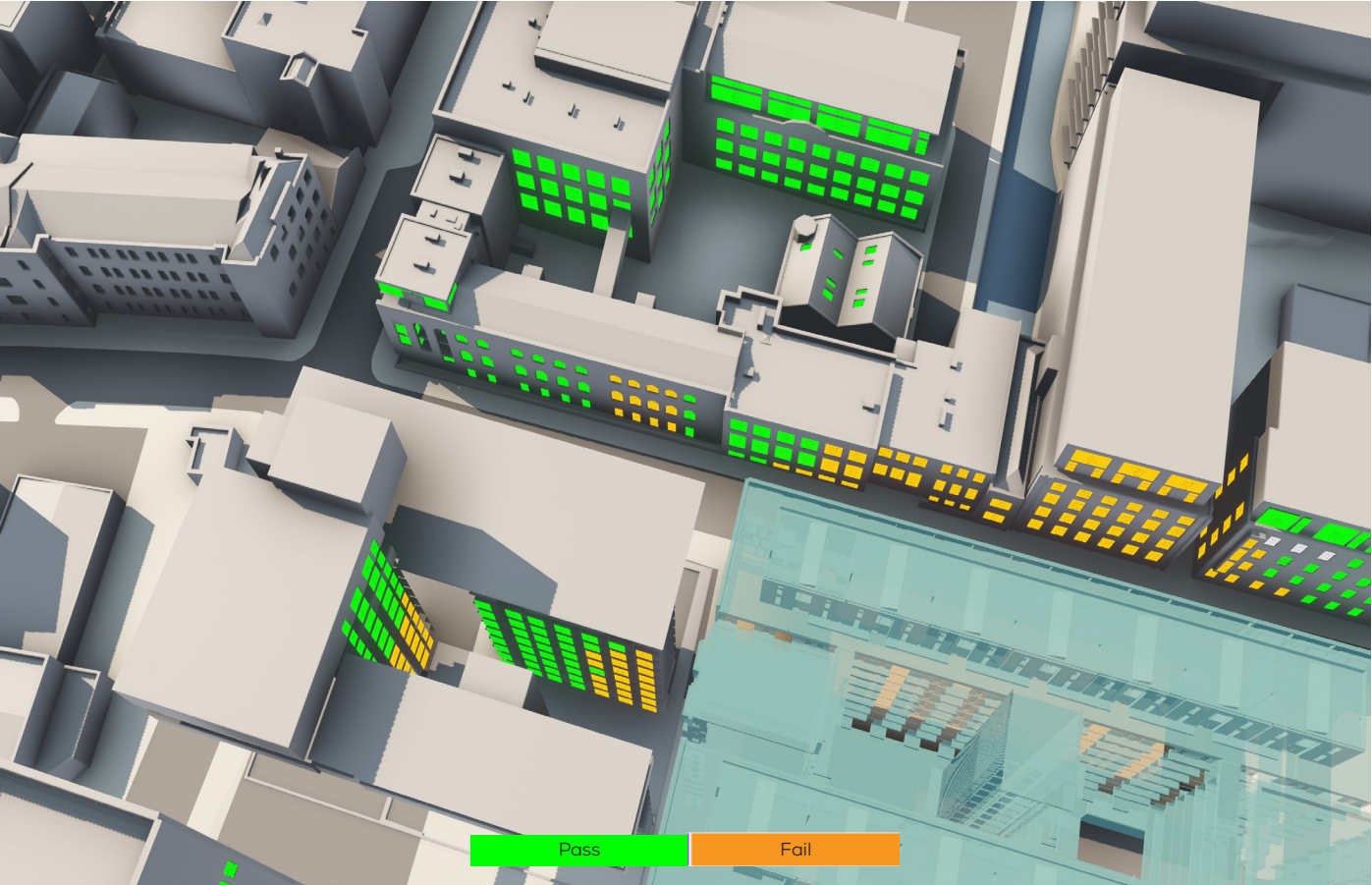


Existing NSL (%) Levels

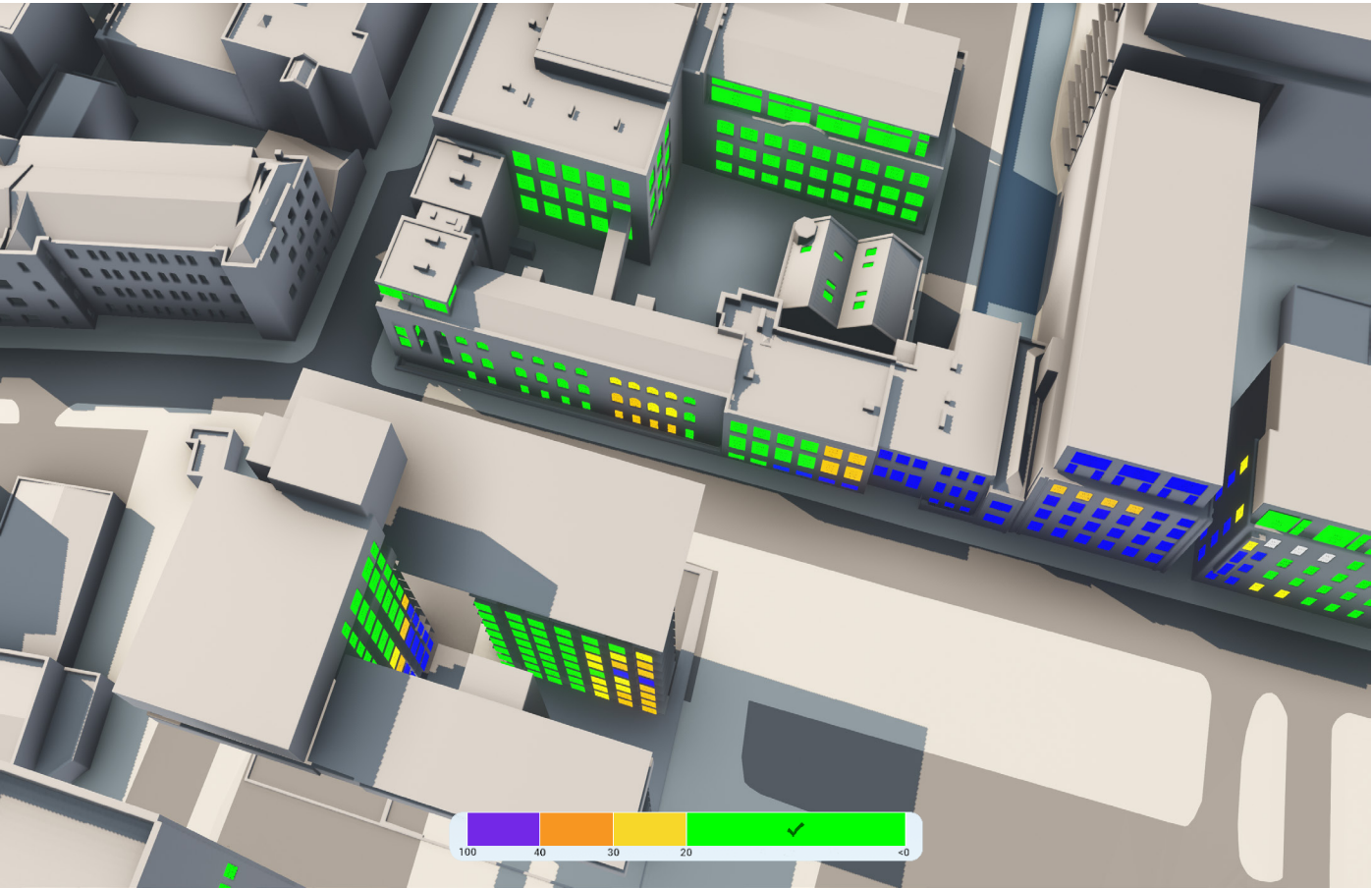


Proposed NSL (%) Levels

NSL Results

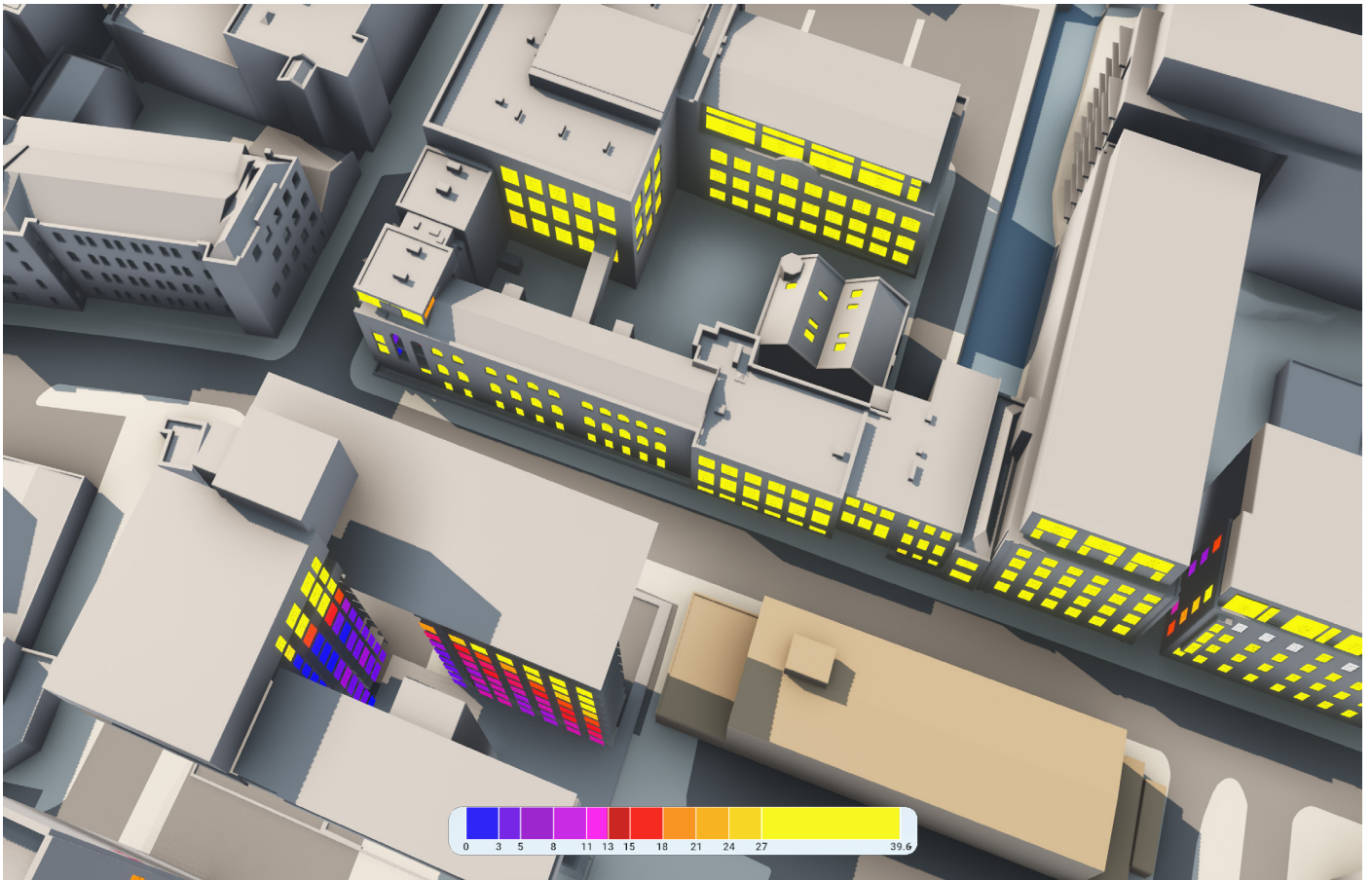


NSL Pass/Fail

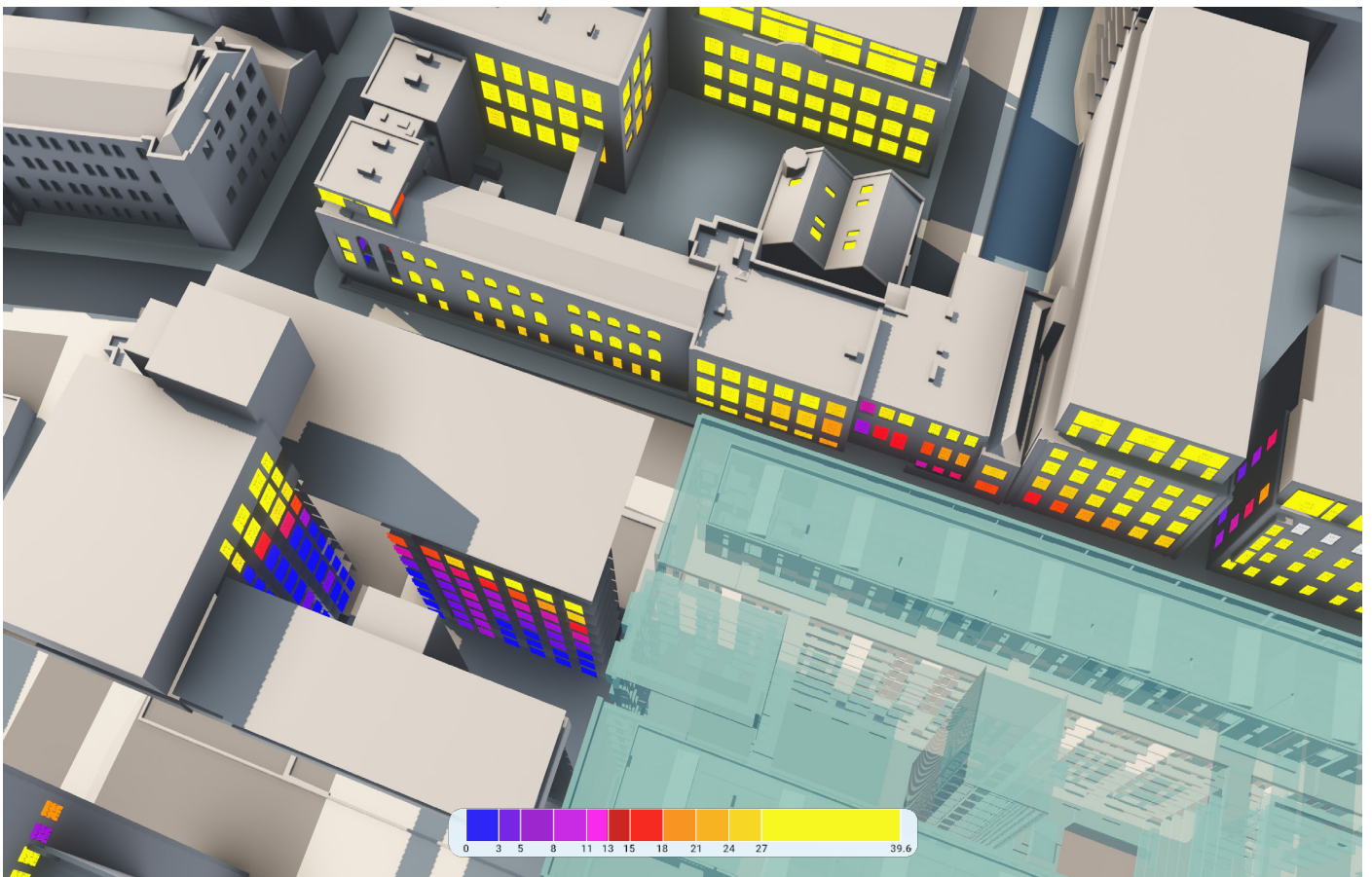


NSL (%) Reductions

APSH Results

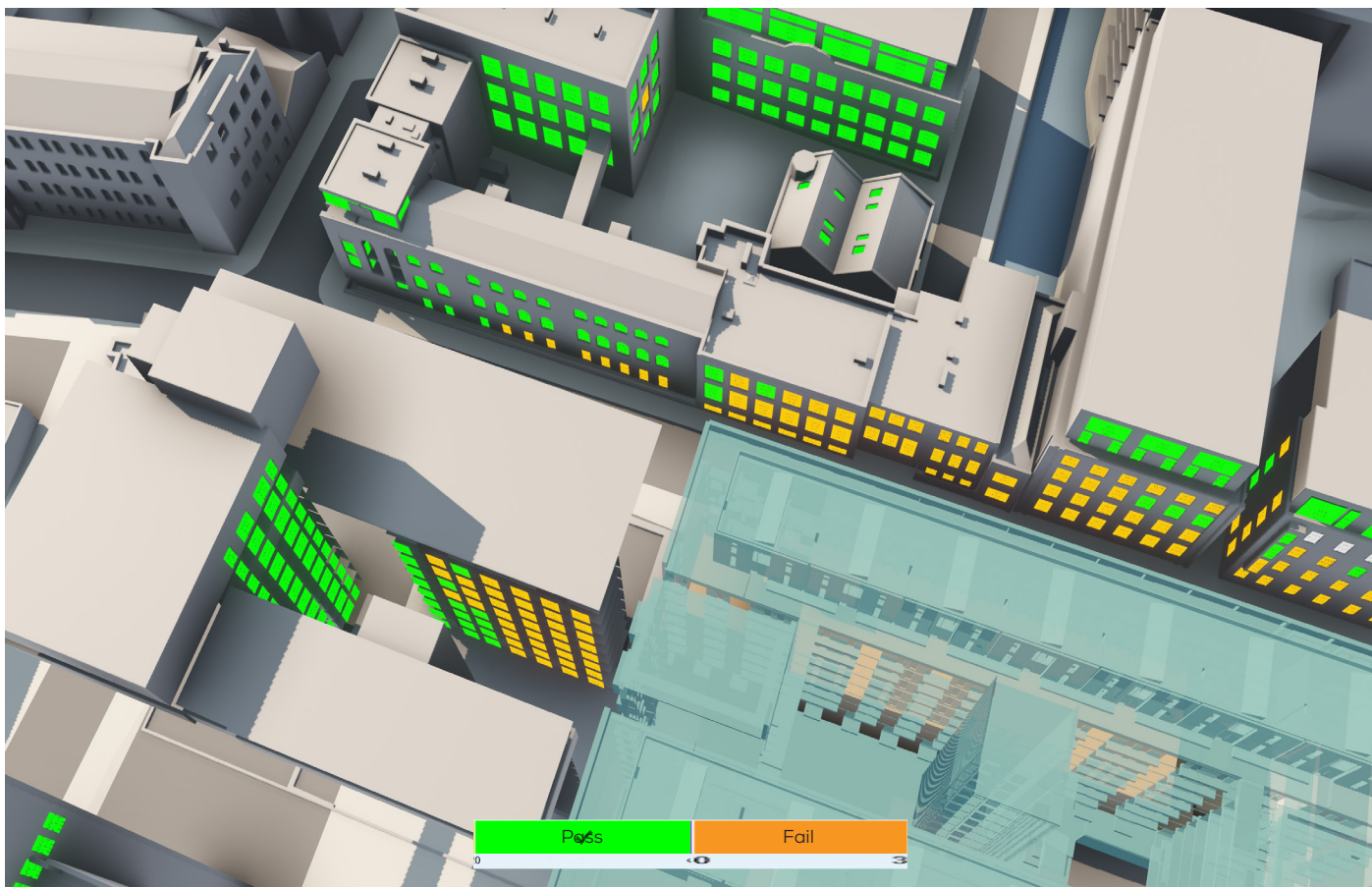


Existing APSH (%) Levels

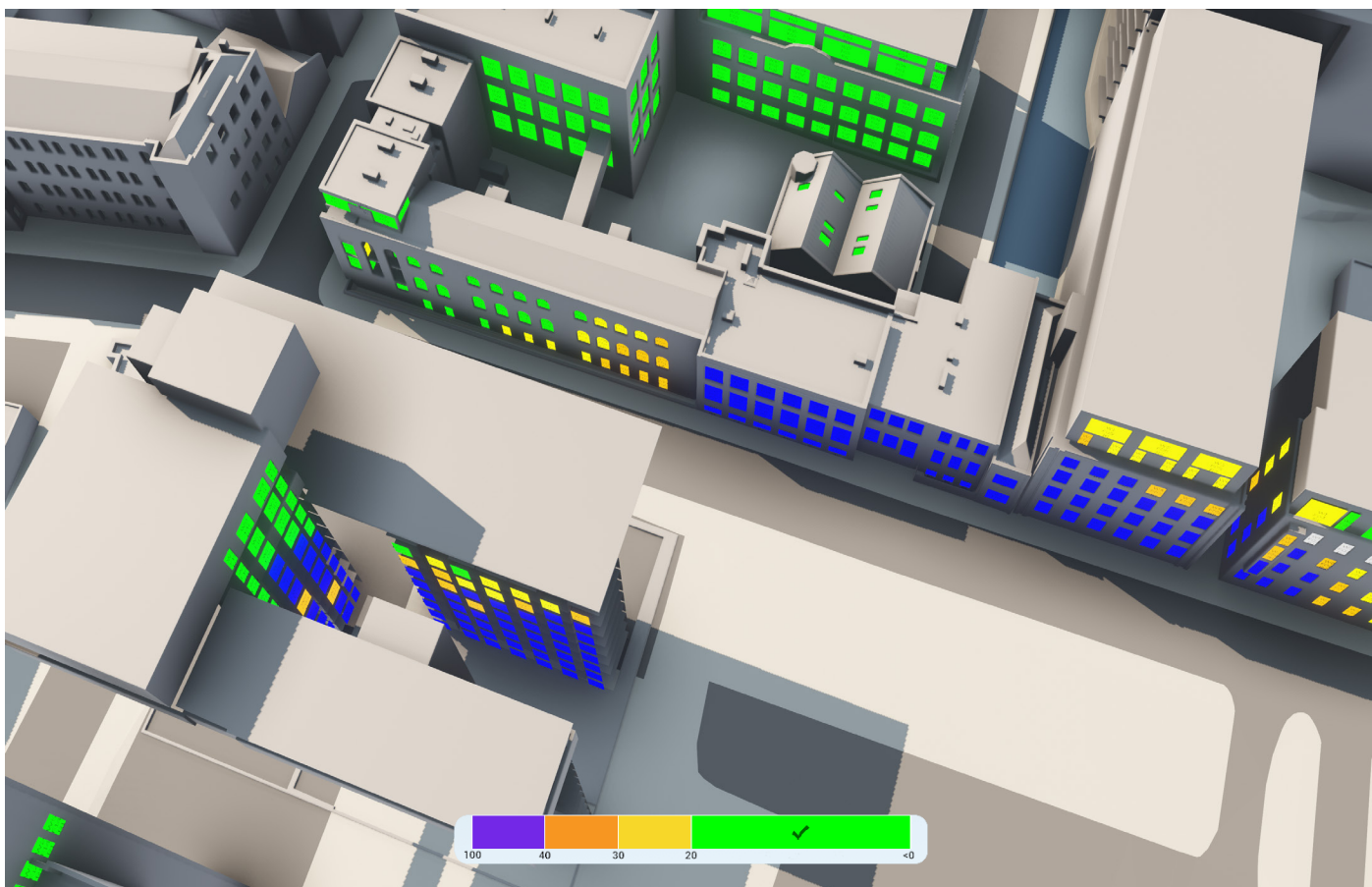


Proposed APSH (%) Levels

APSH Results



APSH Pass/Fail



APSH (%) Reductions

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