

PROPOSED DEVELOPMENT AT 140 GREAT ANCOATS STREET: ANALYSIS OF LEVELS OF RETAINED DAYLIGHT TO 'OXYGEN BUILDING' IN THE CONTEXT OF MANCHESTER CITY CENTRE

9 DECEMBER 2025

1) Introduction

This briefing note is provided by GIA and Turley. It presents information on the typical performance of city centre residential locations in terms of natural light which residences have access to. This provides a benchmark for considering the impacts of the proposed development at 140 Great Ancoats Street (the Stocktons furniture site) on residences within the adjacent Oxygen building which runs parallel to Block A of the development along Store Street.

The amount of daylight within a room depends principally upon the amount of sky that you can see from its window/s (referred to as Vertical Sky Component (VSC) in the various reports). This is confirmed by the Building Research Establishment guidelines (BRE).

Paragraph F7 BRE states:

“In assessing the loss of light to an existing building, the VSC is generally recommended as the appropriate parameter to use. This is because the VSC depends only on obstruction, and is therefore a measure of the daylight environment as a whole.”

If there was nothing else (like other buildings) preventing you from seeing the sky from a vertical window, the maximum amount of the sky that you would be able to see is about 40%.

The BRE suggests that, if you can see 27% of the sky, then the room will have a reasonable amount of daylight.

You would only be able to see 27% of the sky from a vertical window if the buildings that you can see were no higher than a 25 degree angle from the middle of the window that you are looking out of.

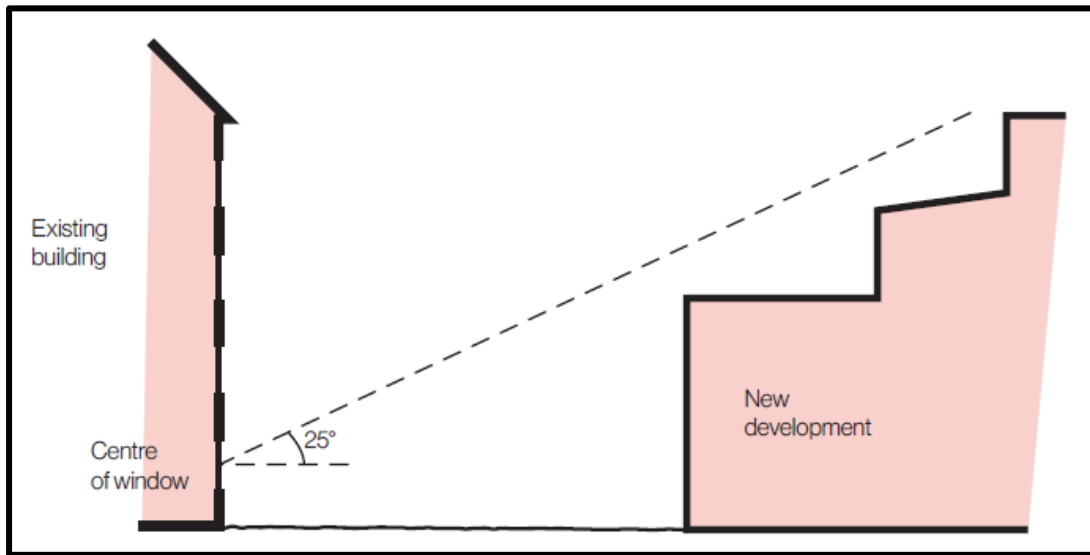


Figure 1: Illustration of 25 degree angle

When looking out of a vertical window, the surrounding buildings are, in general, only below a 25 degree angle in residential areas on the outskirts of a city (suburban locations), which the BRE itself acknowledges.

Paragraph 1.6 BRE states:

“... The advice given here is not mandatory and the guide should not be seen as an instrument of planning policy...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.”

As the buildings in a city (urban location) are much taller and closer together, the development angles will be much higher than 25 degrees. A higher development angle means that less of the sky can be seen from a window. It therefore stands to reason that levels of

daylight in urban locations will be lower than they are in sub-urban locations. In practice this reflects a trade-off between the benefits one takes advantage of by choosing to live in a vibrant city centre location and those which one can reasonably expect in a more suburban location, such as internal and private external space and natural light.

This principle is carried forward into national planning policy which provides direction in respect of the determination of planning applications.

Paragraph 007 Reference ID: 66-007-20190722 of the Planning Practice Guidance (PPG) 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 [emphasis added] 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...”

Paragraph: 004 Reference ID: 66-004-20190722 of the PPG states:-

“A range of considerations should be taken into account in establishing appropriate densities on a site or in a particular area. Tools that can assist with this include...characterisation studies [emphasis added] and design strategies, dealing with issues such as urban form, historic character, building typologies, prevailing...daylight levels [emphasis added], green infrastructure and amenity space...”

In the case of the subject scheme, the development, and the nearby Oxygen scheme, have a long interface with Store Street, running parallel to one another for some 52 m. This is a product of the relationship of the two sites to each other. There is an acceptance that this relationship means that a large number of windows are affected – Oxygen is itself one of the largest single blocks of residential properties in the city centre (accommodating nearly 400 dwellings) and extending along Store Street by more than 100 m presenting the longest unbroken single façade in the city centre given it a higher level of exposure.

The critical question to address however is not how many windows are affected but to what extent those windows are, in relative terms, affected, benchmarked against other schemes and city centre settings.

2) Maximising the site's contribution to regeneration

The development approach to the site should be viewed in its context.

In this case, the site is located within a major regeneration location within the city centre, close to Piccadilly station and areas of major economic investment, including the proposed development of the former Central Retail Park site, Mayfield and Sister and occupying a key connecting location between the core of the city centre and the growing Etihad Campus.

It forms part of one of the largest development sites in the city centre, alongside the Presbar Diecasting site located to the rear, providing the opportunity to deliver a broad range of uses and a scale and quality of development and place which contributes to the continued growth, expansion and success of the city centre.

Brownfield regeneration sites of this size are increasingly rare within the inner ring road. With this comes opportunity for the site to contribute to a variety of objectives for the city centre as a place to live providing jobs and open spaces alongside. In turn, it presents the opportunity to redefine this part of the city centre being a catalyst for the development of a key mixed use quarter within the context of the wider Piccadilly neighbourhood.

Finite land of this type, scale and location must be used efficiently and effectively to optimise the positive outcomes from development and investment. This means building at appropriate densities reflective of the site's sustainable location, its situation in the city centre and which enables the city to meet the demand for homes and commercial space whilst not placing undue pressure on established residential locations beyond the city centre.

Against this backdrop, the City Council has set out its vision and aspiration for the site, and surrounding land, within the East Village Central Strategic Regeneration Framework (SRF) updated in June 2025. This shows a form of development which reflects the application proposals, including development rising to 50 storeys at the corner of Great Ancoats Street and Store St.

The development principles and parameters presented within the SRF will enable the following vision, set out within the SRF, to be realised:

“The Site will be a vibrant, sustainable city-centre destination, respectfully integrating living, working, and leisure uses within its unique setting. Building upon its industrial heritage through innovative reuse, it will foster a strong, diverse community and

become a unique destination for generations to come. Inviting public spaces and distinctive architecture will seamlessly connect it to the city centre, creating a thriving, green neighbourhood for everyone.”¹

This context establishes the regeneration imperative and sets the site’s baseline as a key strategic investment opportunity within the city centre with a critical role to play in the continued growth and success of the city centre and the realisation of the benefits which flow from this. The scheme reflects a continuation of the very approach which has enabled the city centre to become what it is today.

This is an important strategic driver of the development and a key influence on the approach to the site in terms of the form of development and scale accommodated.

Below we highlight in Section 3, an appeal Inspector’s consideration of this very issue and how the local policy priority of ‘maximising development opportunities in the city centre’ interplays with a consideration of impacts on existing residences in relation to this topic.

Other design influences

Against this backdrop, it is important to note that the proposal as presented is a product of a process of appraising design options which seeks to balance a range of (sometimes competing) considerations to arrive at the optimum form of development for the site. No single input has been set aside in this process but equally no one such input drives this process. Underpinning the approach is the need to ensure an acceptable development arrangement considered across all relevant metrics.

This process must be carried out in the context of what is achievable, including a full understanding of site constraints. Key inputs to the design process in this regard are numerous. They include the development’s relationship with buildings and uses *outwith* the site and the development’s impacts, such as on residential amenity. They also include the need to achieve a scheme which responds positively to its wider urban context in order to maximise its regeneration impact.

In considering this matter, we would note, aligned to the comments above, that this development has an important, and bespoke, regeneration role in delivering both the East Village Central SRF, contributing to the wider Piccadilly SRF and particularly in supporting the effective integration of this key regeneration location, which includes the Central Retail Park development, into the wider commercial core of the city centre and facilitating pedestrian and cycle movement via establishing a permeable street pattern in an

¹ East Village Centre SRF (Update) June 2025

area undergoing extensive change. We consider this to be an important strategic influence on the development and which the scheme should respond to, to the extent this is achievable in an acceptable manner.

Masterplan, Plot Definition and Public Realm

The SRF determined two key requirements with respect to developing the wider site in the East Village Central area for both Stocktons and Presbar. These related to firstly, the proportion of ‘*Open Space*’ and secondly the appropriate level of, and distribution of, ‘*Building Height*’ on the site.

The need for open space meant that the site needed to be broken into separate plots to allow the buildings to breath and the site to be opened up, increasing pedestrian permeability and offering the chance for new landscaped and useable spaces.

Within the development, it is deemed important to locate the plots to mark the two street corners with Great Ancoats Street, Ducie Street and Store Street, respectively. This is highly beneficial in urban design terms in order to re-activate and mark the existing street pattern and to positively embrace Great Ancoats Street as a key arterial route which marks the edge of the traditional core of the city centre.

This arrangement also offers the opportunity for the car-free public space to be in the centre of the new development. In this regard, the design team considered it important that the location and orientation of this space worked with the new open space being delivered as part of the Central Retail Park site redevelopment with a view to enabling a continuation of this green space and key active travel movement corridor through the site and, in the future, to be continued through the development of the Presbar site. This will emerge as a strategic area of linear public realm and open space running through this part of the city centre and facilitated by a combination of developments.

Viability

Whilst the SRF implied that two plots were appropriate on the site, this was questioned in some of the early design options considered by the design team where a single building composition of an office podium and a residential tower, the tower was located on the corner of Ducie Street and Great Ancoats Street and was lower in height than the Oxygen building. The arrangement was a different urban design typology of a single tower that stepped in height towards the Oxygen as single marker of the junction of Store Street and Great Ancoats Street.

The issue with the arrangement was that it was simply non-viable for the following reasons; the tower didn't provide a sufficient quantity of residential accommodation and the lack of a clear separation between the two functions was deemed to be unattractive to the funding market. Additionally, the podium building occupied too much of the site and therefore couldn't meet the '*Open Space*' criteria of the SRF nor open up the permeability of the wider urban block to Great Ancoats Street. It was clear to the development team and the design team that two individual buildings on separate plots had to be the basis of the arrangement of building on the site.

Environmental influences

Shooters Brook

In terms of key environmental considerations and influences, we would note that a culvert containing Shooters Brook runs under the site which presents a significant limitation to options for the location of the buildings. The culvert presently runs through the southern part of the site, exiting the site at a c90 degree angle along its eastern boundary with Great Ancoats Street.

Its present location within the site would effectively render the site of Block A undevelopable without its diversion.

The only practical way to achieve the diversion, and so unlock the development opportunity, is to route this through the centre of site, beneath the space proposed to be occupied by the central public realm / open space, and so maintaining its exit from the site centrally along Great Ancoats Street at a c90 degree angle. This is shown at Figure 2 below.

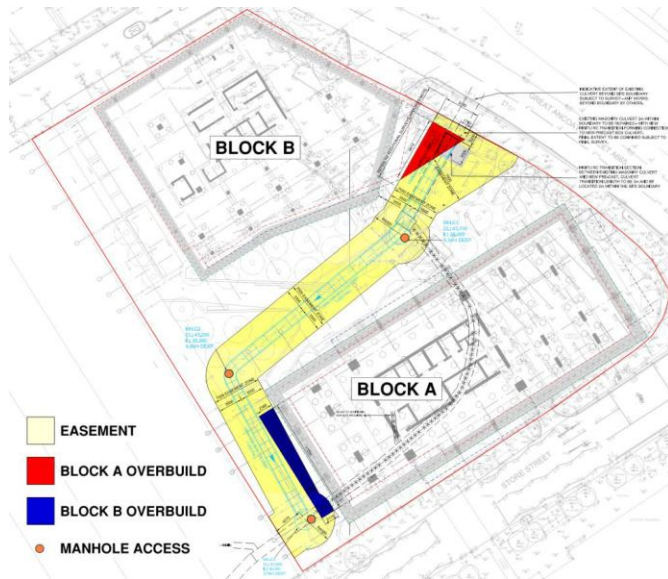


Figure 2: Proposed culvert diversion

This then effectively creates two distinct development areas, either side of the diverted culvert and fixes the layout strategy for the site with means feasible means to alter the positioning of the two buildings whilst providing sufficient public realm and open space within the site as a key objective of the development.

Wind

The prevailing wind direction is from the south west which was a factor in the location of the building massing, if the bulk of the building massing was orientated to be perpendicular to Store Street offering a narrow gable elevation to the street it would offer a broad façade to the prevailing wind which would result in unacceptable comfort conditions in the public realm at the centre of the site and the surrounding streets. The building arrangement would perform better if it offered a narrower elevation to the South West. It should be noted that the final arrangement for Building B which is wider than Building A has a wind mitigation screen at the base of the building which wouldn't be sufficient if the building was wider.

Daylight/Sunlight and Overlooking

The arrangement of the two plots in the two corners of the site meant that a good separation between buildings could be achieved; with distances ranging from 22m-25m between the buildings on the site – to enable the creation of useable open space / public realm – whilst achieving acceptable distances to existing residential properties (18 to 21m along the Store St boundary). Having established good distance between buildings, the alignment of Building A follows that of the Oxygen running parallel to the street on the NE-SW axis of the building offering therefore either NW or SE light to the apartments.

Urban Design & Townscape

In addition to establishing the requirement for a minimum quantum of development to be provided in two separate plots of development, that these plots could be logically located in the two corners of the site and thereby creating an open public realm between them and a preferred orientation of the buildings, the remaining issue to determine was the optimum building massing in order to reinforce the townscape and to support the on-going regeneration of the area.

As a design process it was clear to the design team that they were dealing with the arrangement of a ‘*cluster*’ of three towers, one of which was existing (Oxygen), and the best way to arrange these buildings was in a linear stepping arrangement. This cluster would reinforce the junction of Great Ancoats Street, Store Street and the start of New Mill Street and the onward route to Sports City to the east. The stepping in height from Building B up to Building A along Great Ancoats Street allows for a graduation in scale from the height point of the cross-roads down to lower-rise scale to the northwest of Ducie Street.

Around this principle the taller building was then broken into a series of elements the ‘holding piece’ (or ‘up-turned tuning-fork’) and the ‘drawers’ which not only articulated the side elevation offering a sense of movement (inherent to the site as a traffic intersection) and visual interest to Great Ancoats Street, but also enhanced the proportions of the building when seen from the distant axial views of the primary route the building sits on Store Street from the SW and its extension onto New Mill Street to the north east. The resulting composition of the varying heights of the 3 buildings is an elegant combination that can serve to reinforce the ambition for the continuing regeneration of the area. These townscape considerations are explained and illustrated further in section 5.4 of the submitted Design and Access Statement as well as in the Townscape and Visual Impact Assessment.

3) Daylight, sunlight and overshadowing outcomes in context

Set against the above considerations, which outline the key influences and constraints which have informed the scheme and the form it takes, we consider here what is a reasonable level of retained visible sky in the context of Manchester City Centre and, importantly, whether this is achieved in respect of this development and its influence on Oxygen.

This note is not concerned with the magnitude of change experienced by residencies within the Oxygen building – this change is evidentially noticeable existing in the context of a city centre residential building which faces onto 1 – 2 storey buildings at present and which has open views to the north. Rather it is concerned with establishing whether the resultant level of natural light access is reasonable and acceptable for a city centre context.

For this purpose, GIA have reviewed whether the amount of visible sky that windows on the northern façade of the Oxygen building will see with the Proposed Development in place is comparable with other residential settings in Manchester City with a similar relationship as Oxygen Towers and the Proposed Development. This provides a benchmark as to what is acceptable in this context and indeed what residents within Manchester City Centre, in which a successful residential market operates and where properties are in high demand, experience when choosing to live in this area.

To do this, characterisation studies, as recommended by the Manchester Core Strategy, the National Planning Policy Framework & PPG have been undertaken.

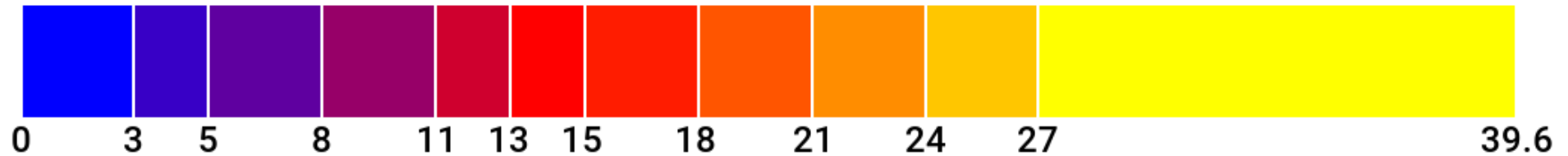
In addition to the Proposed Development, GIA has been involved in the planning applications for the following developments.

- Deansgate South
- Deansgate Square & Great Jackson Street

Detailed analysis models from these have, therefore, been used for the study.

Where GIA has not been involved in the relevant planning applications, a 3D photogrammetric model has been used to indicatively model windows evenly across the facades of the relevant building to enable the same technical assessments to be undertaken as they would in a detailed model.

All of the assessment results have been visualised to show the levels of visible sky (VSC percentage) from the windows based on the below key.



The range of visible sky levels from each window of the relevant façade of each relevant building is then summarised. In order to provide an overall understanding of the amount of visible sky each building can see, an average level of visible sky has been provided.

Below is a summary table of those average levels taken from established, successful residential buildings in the city centre, along with retained levels to Oxygen Towers with the Proposed Development in place.

Address	Average level of visible sky from the development facing elevation	Min VSC level
Deansgate Quay*	3.0%	0%
The Astley	5.5%	1.4%
Hill Quays*	6.2%	0%
Millbank Street Apartments*	6.3%	5.6%
53-55 Great Ancoats Street	9.1%	2.1%
12 Thomas Street*	10.2%	1.5%
Carding Building	13.4%	4.2%
The Birchin*	14.2%	3.2%
Jefferson Place*	15.3%	4.3%
Vox Apartments	15.6%	2.5%
Oxygen Towers (with the Proposed Development in situ)*	15.9%	3%

Address	Average level of visible sky from the development facing elevation	Min VSC level
Linter Building	18.2%	2.8%

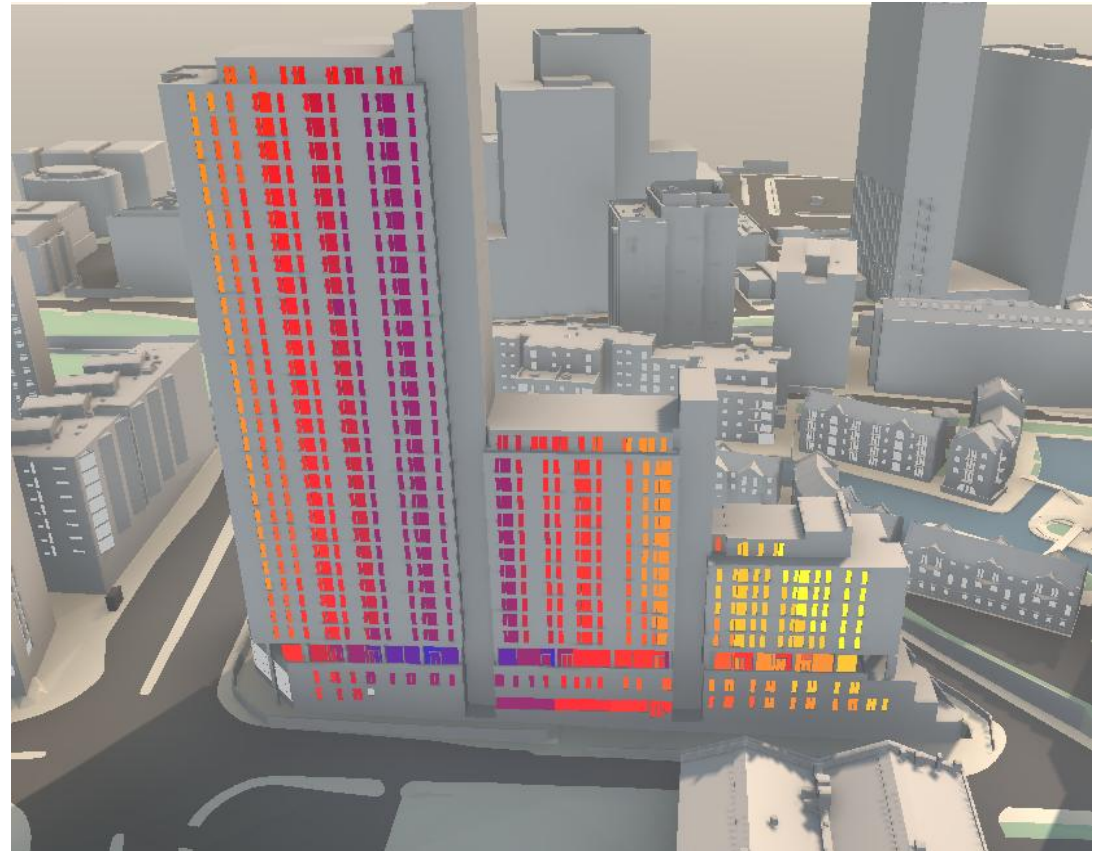
The above table shows a number of successful residential buildings that are recognised as providing attractive and liveable locations to reside and which people make active choices to live in, thus giving practical, recognisable examples of living conditions in the city centre. A number of these locations receive VSC levels which fall below those anticipated by the BRE, but they are contextually appropriate for the city.

It should also be noted that in the cases with an *, the resultant VSC levels reflect the impact of a development on an existing and already occupied residential building, as distinct from levels which reflect an 'internal' impact (i.e. where one or more proposed block affects another one or more proposed blocks within the same development).

This table shows that the retained levels to Oxygen Towers will therefore be entirely in keeping with expectations for daylight in the city centre.

Individual case studies

Oxygen Towers – 18.5m from the Proposed Development



Sky visibility levels range between 3.0% and 39.6%

The average amount of visible sky for the building is 15.9%

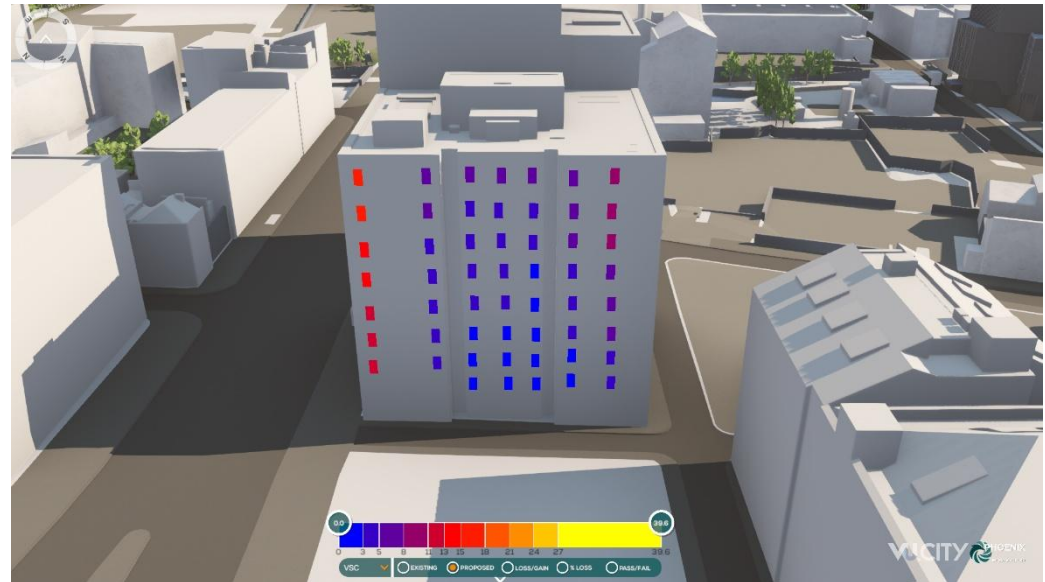
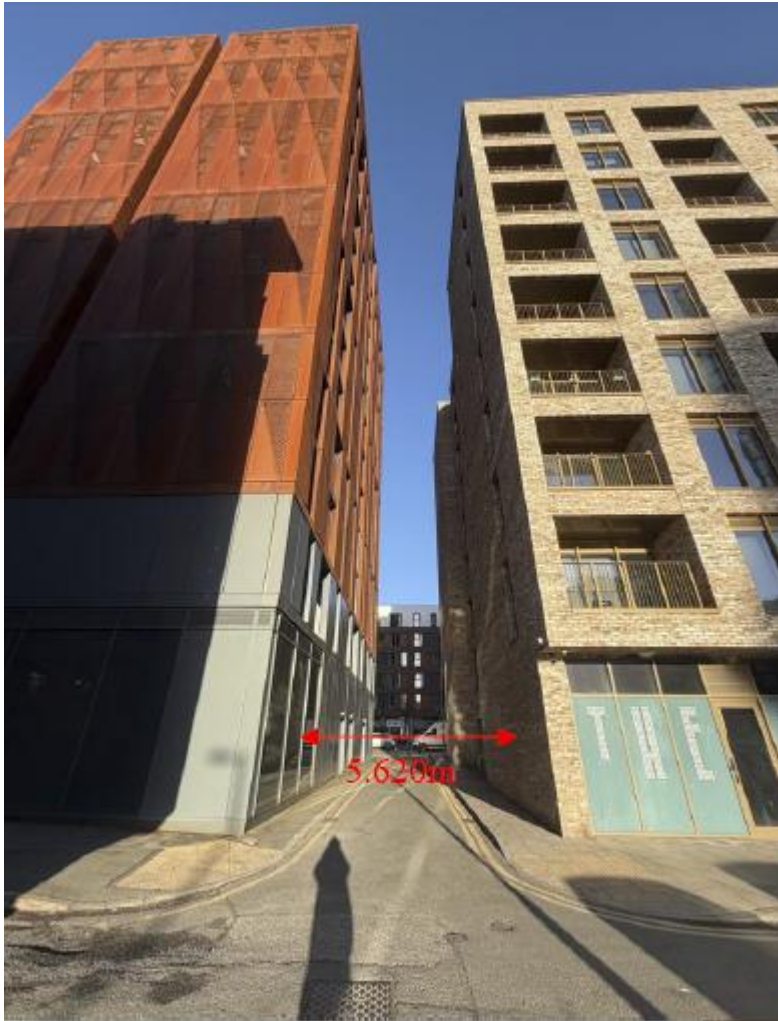
Millbank Street Apartments – 19.5m from Oxygen Towers



Sky visibility levels range between 5.6% and 7.4%

The average amount of visible sky for the building is 6.3%

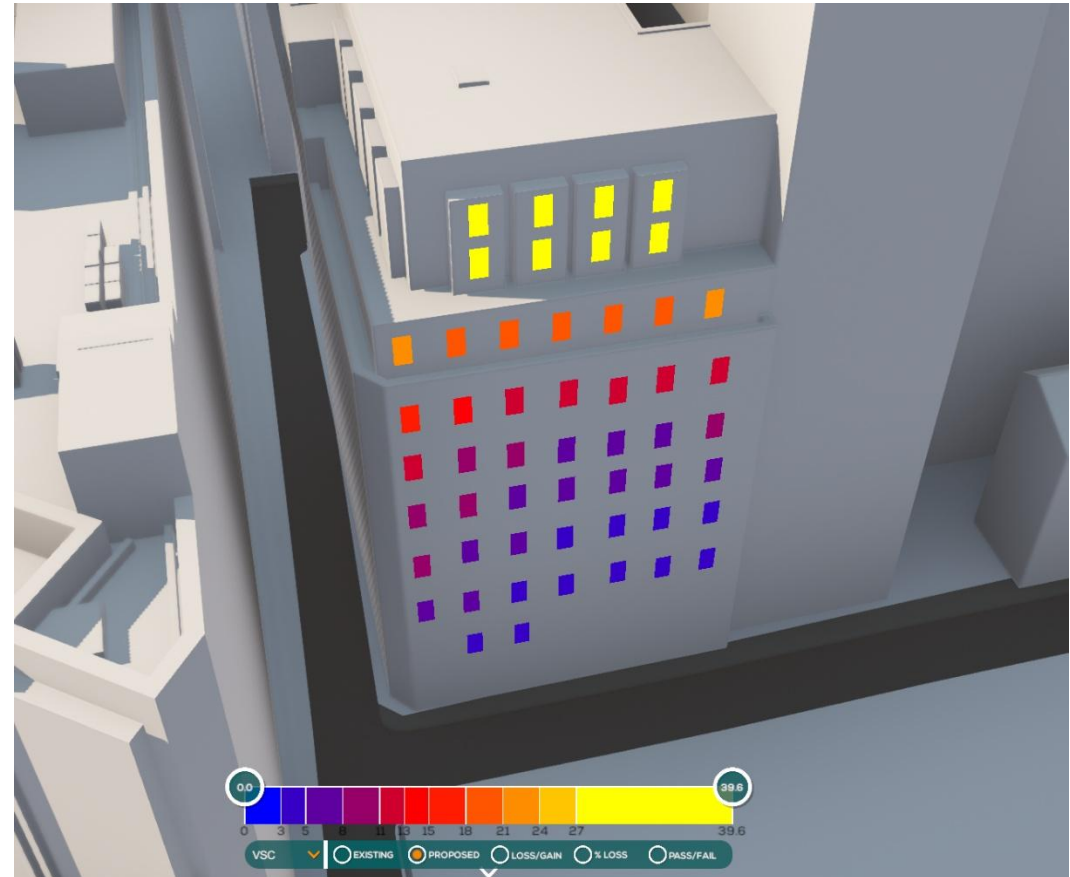
The Astley – 5.6m from Oxid



Sky visibility levels range between 1.4% and 16.5%

The average amount of visible sky for the building is 5.5%

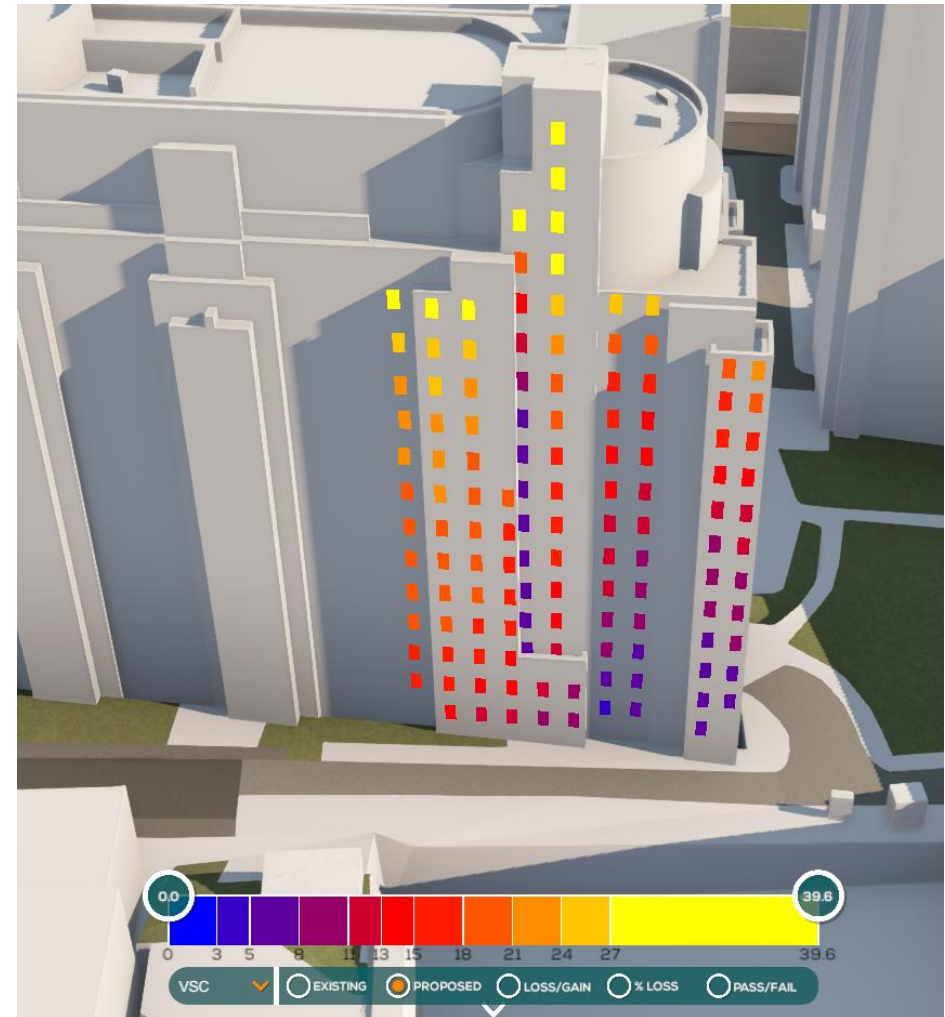
The Birchin – 6.9m from Transmission House



Sky visibility levels range between 3.2% and 33.1%

The average amount of visible sky for the building is 14.2%

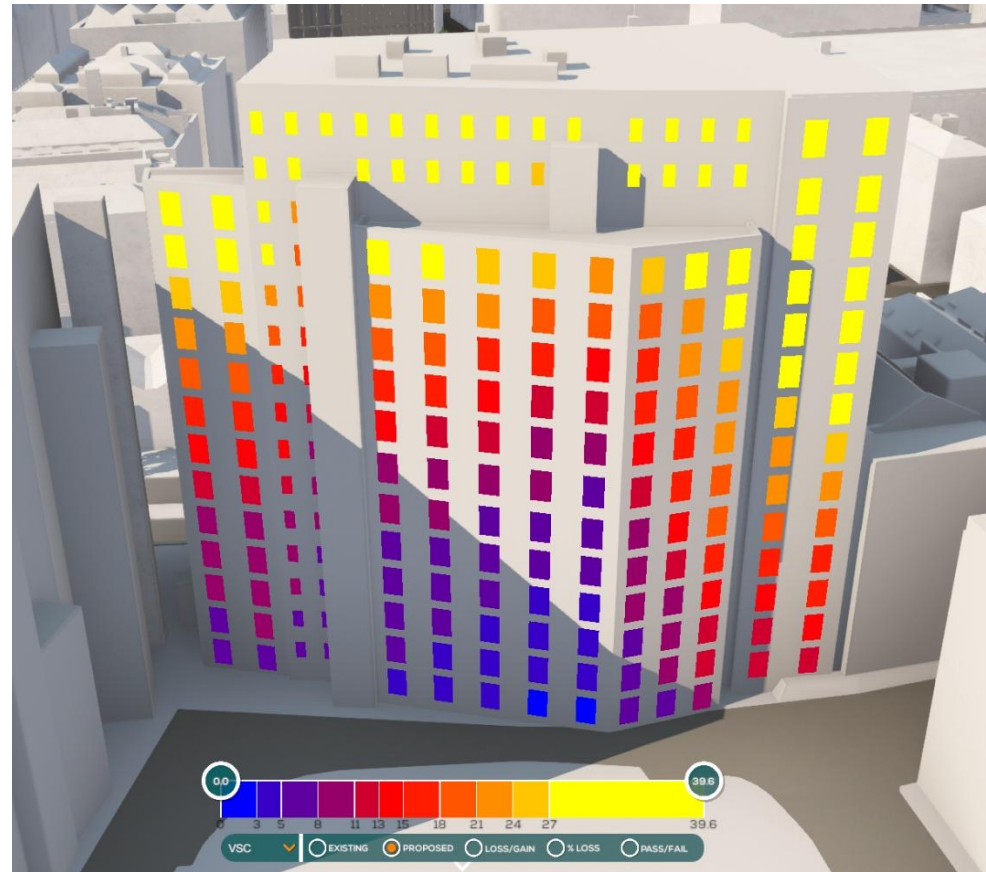
Jefferson Place – 10.3m from Hallmark



Sky visibility levels range between 4.3% and 36.3%

The average amount of visible sky for the building is 15.3%

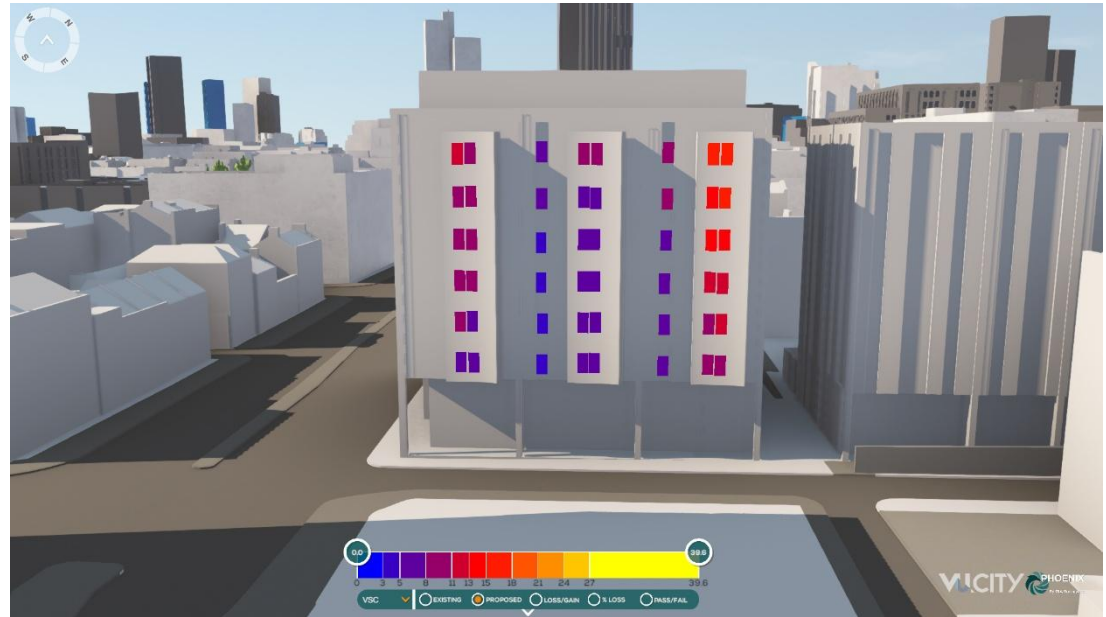
Linter Building (Manchester New Square) – 15.9m from Carding Building



Sky visibility levels range between 2.8% and 39.4%

The average amount of visible sky for the building is 18.2%

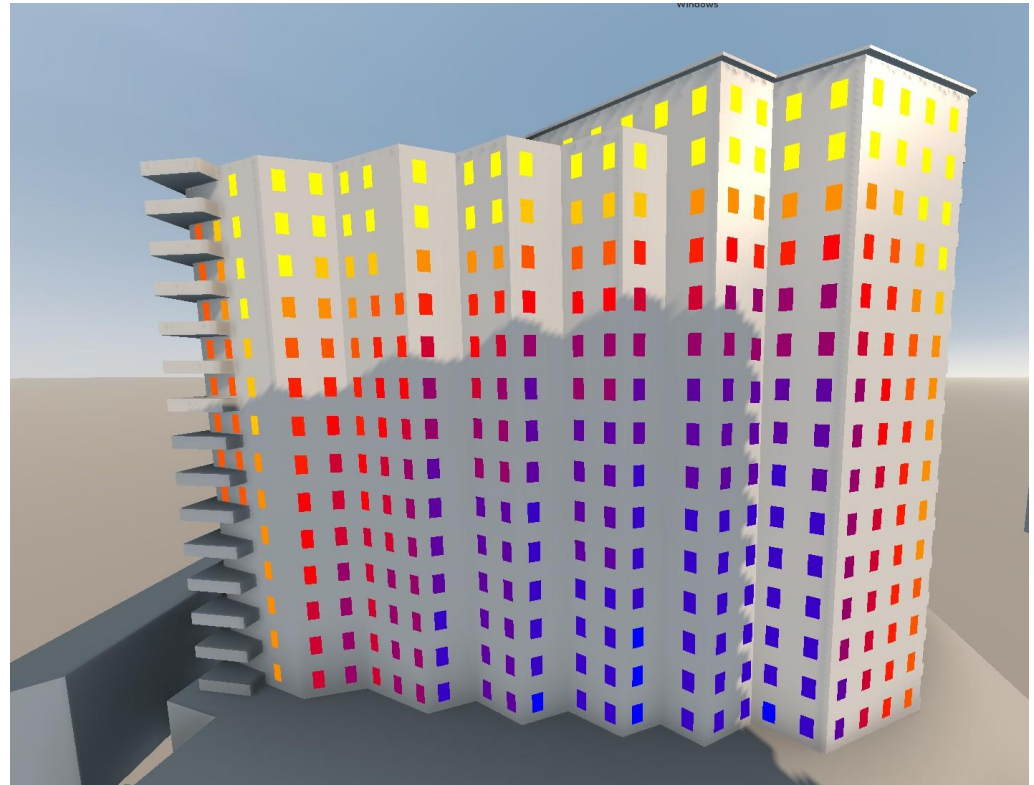
53-55 Great Ancoats Street – 12.3m from Nuovo



Sky visibility levels range between 2.1% and 16.1%

The average amount of visible sky for the building is 9.1%

Vox Apartments – 5m to 14m apart



Sky visibility levels range between 2.5% and 39.3%

The average amount of visible sky for the building is 15.6%

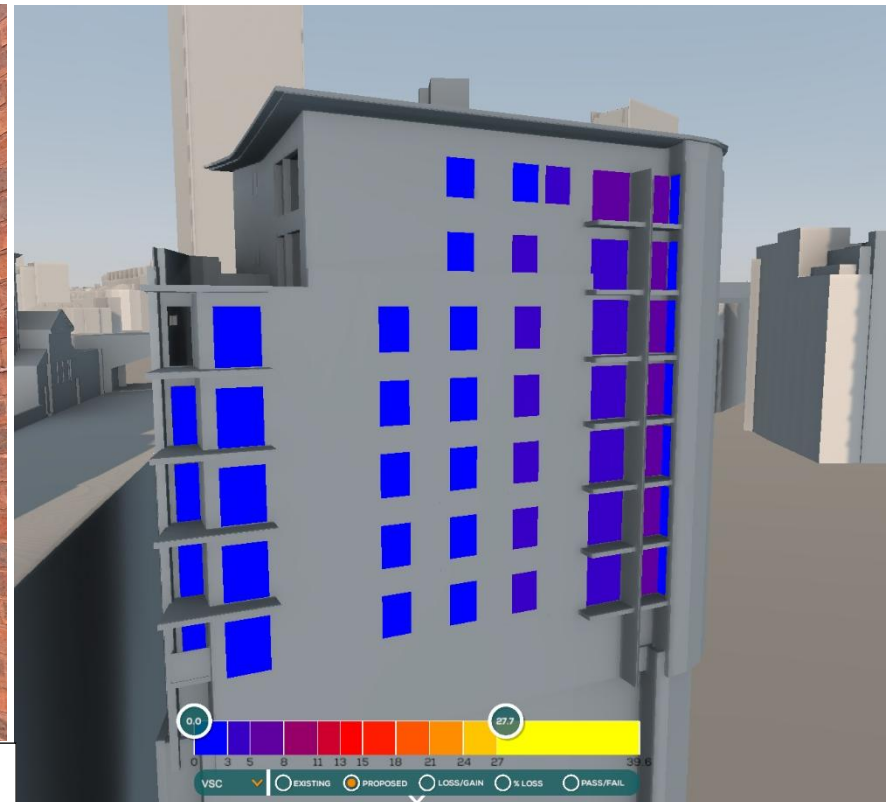
Deansgate Quay – 8.9m from Deansgate South



Consent for Deansgate South was granted on appeal

(APP/B4215/W/21/3287525) with the inspector saying the following:

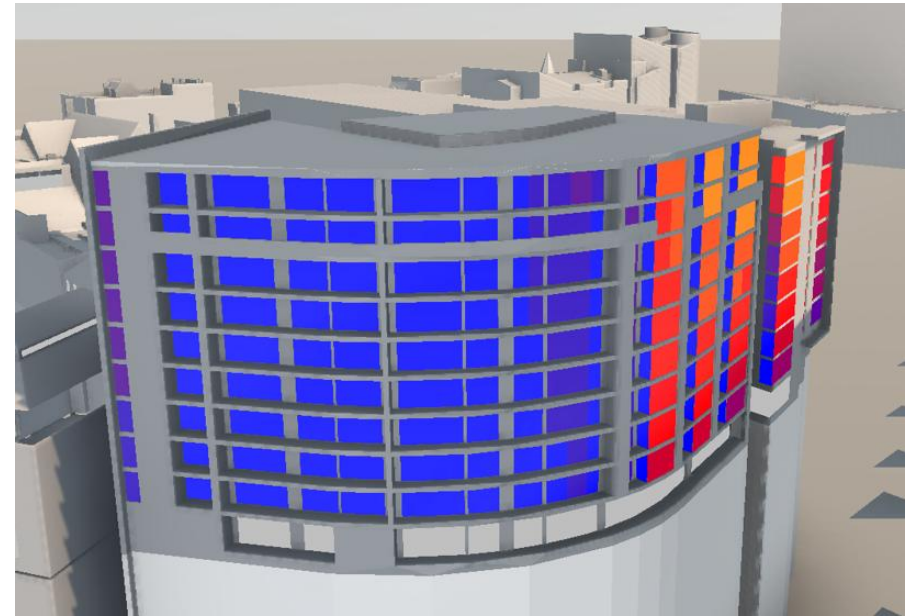
“The proposed development would result in reduced levels of daylight and sunlight in living rooms in flats in Deansgate Quay. But daylight and sunlight levels would be reduced by any realistic development on the appeal site and, on the basis of evidence provided at the Inquiry, to the same degree. Consequently, given also that CS policy CC6 emphasises the importance of maximising development opportunities in the city centre, reduced levels of daylight and sunlight in living rooms in Deansgate Quay would not be unacceptable.”



Sky visibility levels range between 0% and 10.1%

The average amount of visible sky for the building is 3.0%

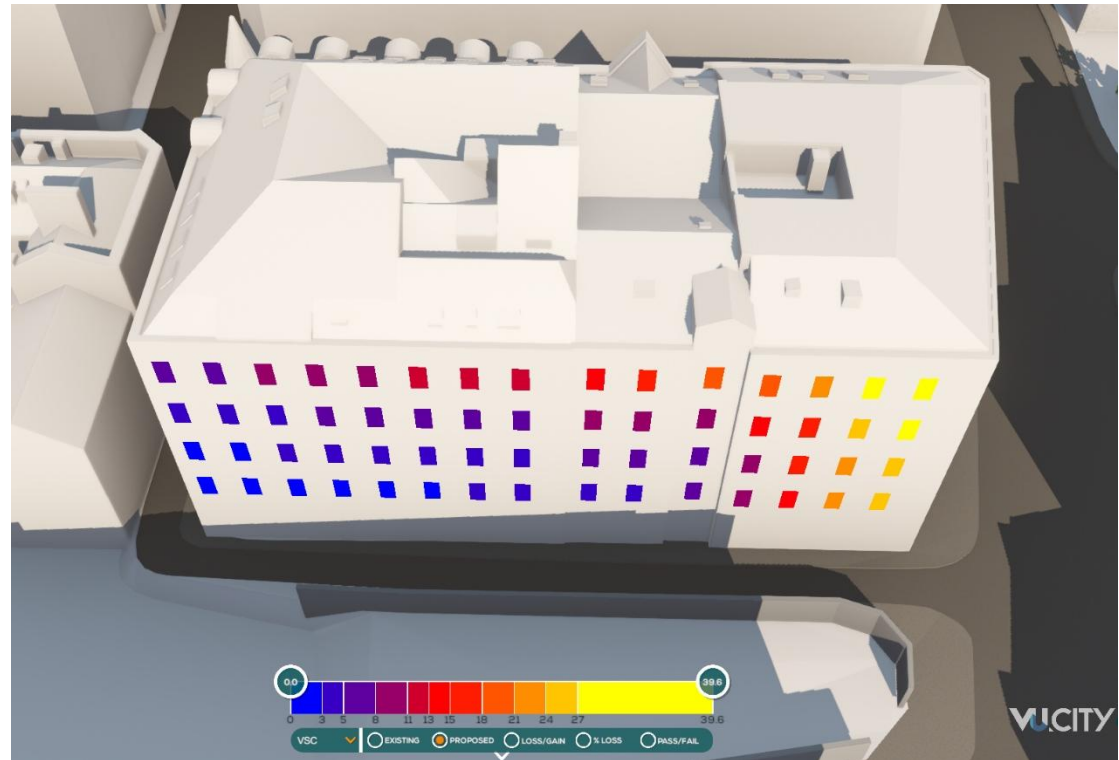
Hill Quays – 22.5m from Deansgate Square & Great Jackson Street



Sky visibility levels range between 0% and 33.8%

The average amount of visible sky for the building is 6.2%

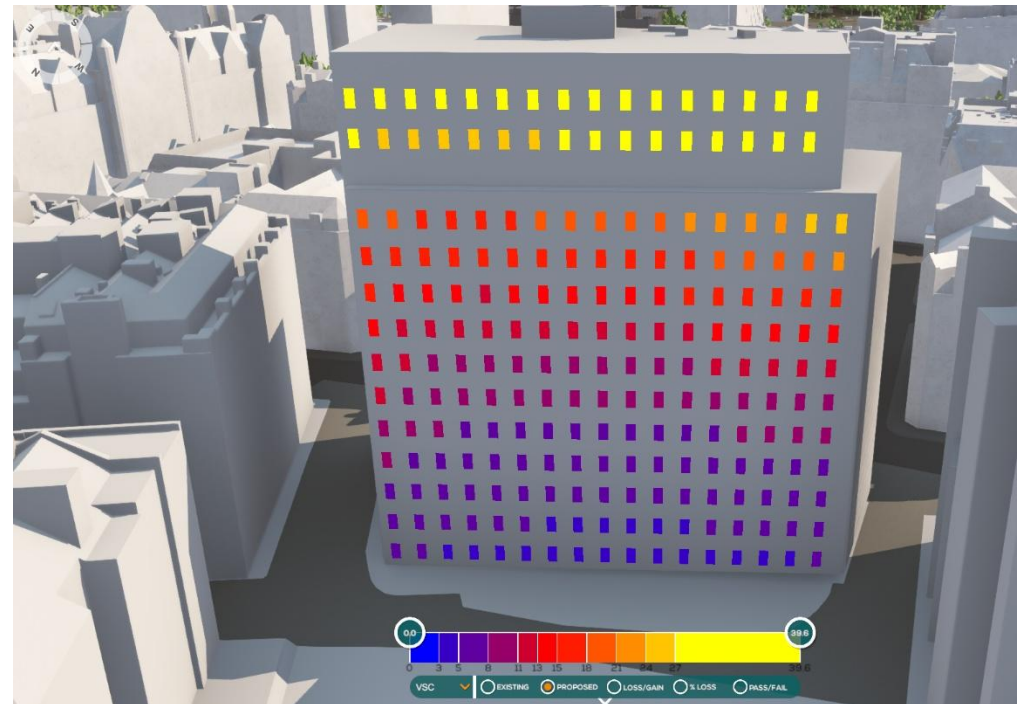
12 Thomas Street – 4.8m from Glassworks



Sky visibility levels range between 1.5% and 32.0%

The average amount of visible sky for the building is 10.2%

Carding Building (Manchester New Square) - 15.9m from Linter Building



Sky visibility levels range between 4.2% and 35.5%

The average amount of visible sky for the building is 13.4%