North Building Facades

View approaching from North

View of North Building approaching from South-west

Daylight Sunlight

Daylight & Sunlight

Summary of reductions in daylight and sunlight from the baseline to neighbouring residential properties beyond the level considered noticeable and negligible (>20%).

Daylight (VSC & NSL) / Sunlight

The following properties have been assessed as achieving 100% compliance with the BRE guidelines for VSC with the proposed development in place:

55 Aldersgate Street (also meets NSL)
Lauderdale Tower (also meets NSL)
1 Little Britain (also meets NSL)
2-3 Little Britain (also meets NSL)
4 Little Britain (also meets NSL)
5 Little Britain (also meets NSL)
6 Little Britain (also meets NSL)
Spencer Heights, Bartholomew Close
75 Little Britain (also meets NSL)
Wallside, Barbican (also meets NSL)
Seddon House (also meets NSL)
Ironmongers Hall – Master's Flat (also meets NSL)
St Botolph's Without Aldersgate (also meets NSL)
Mitre House (also meets NSL)
20 Little Britain (also meets NSL)
Roman House (also meets NSL)
The Underwood Building (also meets NSL)
60 Aldersgate Street (also meets NSL)
City of London Girls' School (also meets NSL)
Dominion House (also meets NSL)
St Giles Cripplegate (also meets NSL)
Barbican Conservatory (also meets NSL)

Daylight (NSL) / Sunlight

The following additional properties are assessed as meeting the BRE criteria for NSL with the proposed development in place in addition to those on the page above:

Seddon House

Thomas More House

Barber Surgeon's Hall

55 Aldersgate Street

Lauderdale Tower

Plaisterer's Hall

125 London Wall

For sunlight, 90.5% of the windows within 90-degrees of due south tested would meet the BRE guidelines for APSH.

Daylight / Sunlight - Notes

Weighted mean

For the VSC analysis, the BRE Guidelines allow a weighted mean meaning in some instances where an individual window sees a reduction in VSC beyond negligible the room as a whole does not.

Similarly, the BRE Guidelines allow sunlight to be assessed at a room level meaning in some instances where an individual window sees a reduction in APSH beyond negligible the room as a whole does not.

Façade images (to follow)

Facades of the buildings with windows/rooms that see a reduction beyond negligible in Daylight (VSC and/or NSL) and/or Sunlight (APSH) because of the proposed development follow below.

Winter sunlight results are submitted but are not shown on the images below.

Daylight Illuminance (Radiance)

Daylight illuminance images showing the change in lux levels across the floor areas for the rooms with the greatest reductions also follow below.

London House, 172 Aldersgate Street

Daylight (VSC)

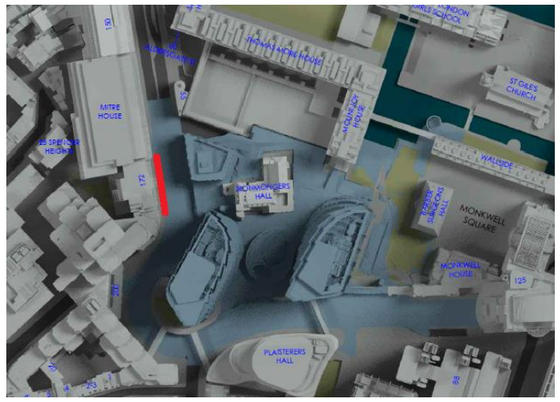
Daylight (NSL)

Sunlight (APSH)

Reductions from baseline for individual windows / rooms.

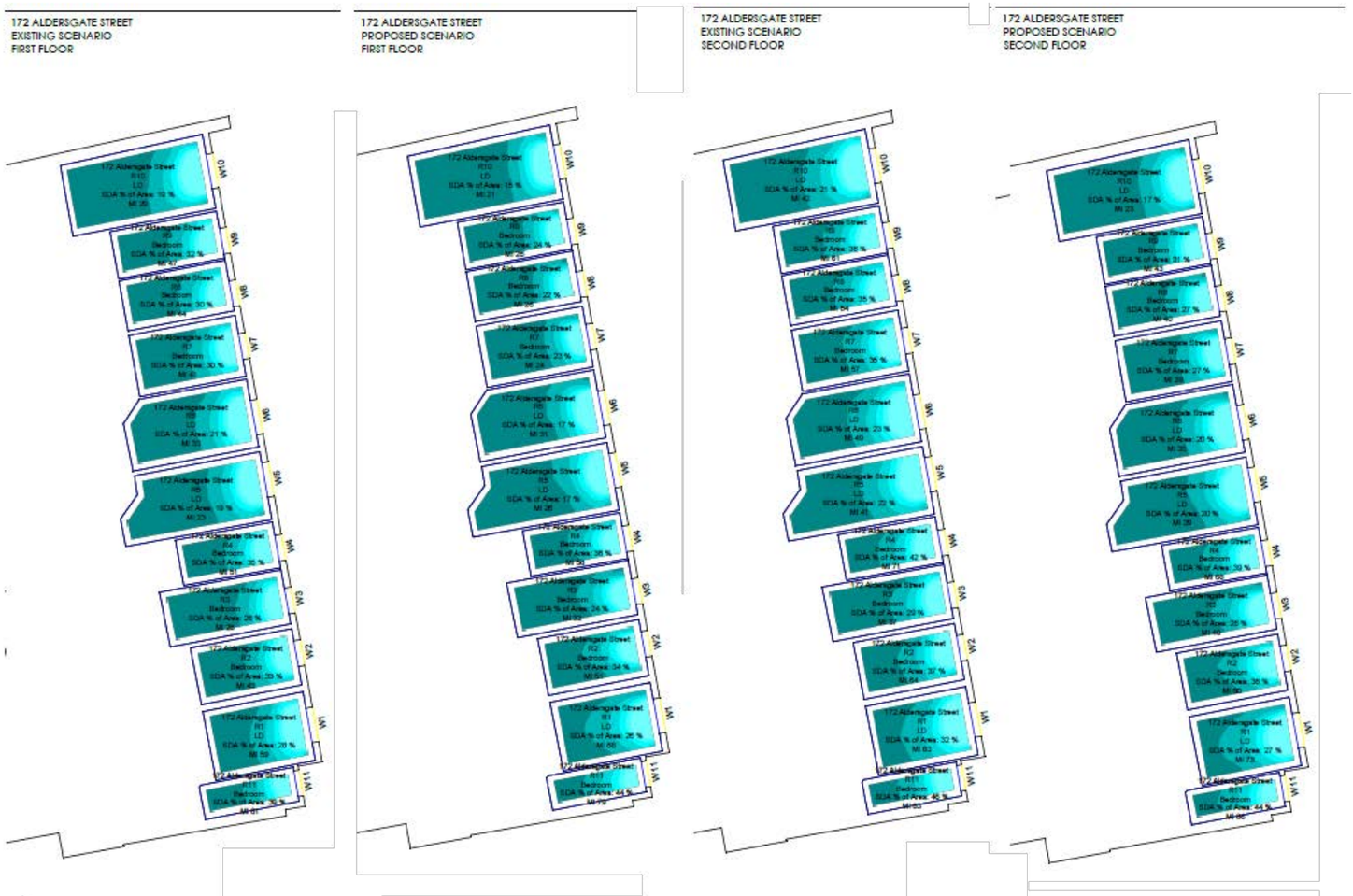
- Minor adverse (20% to 30%)
- Moderate adverse (30% to 40%)
- Major Adverse (>40%)

Location



London House, 172 Aldersgate Street

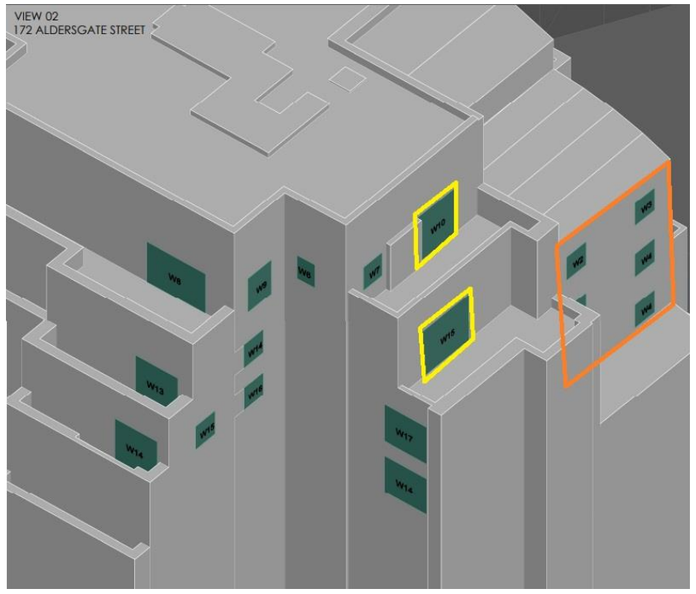
Daylight illuminance



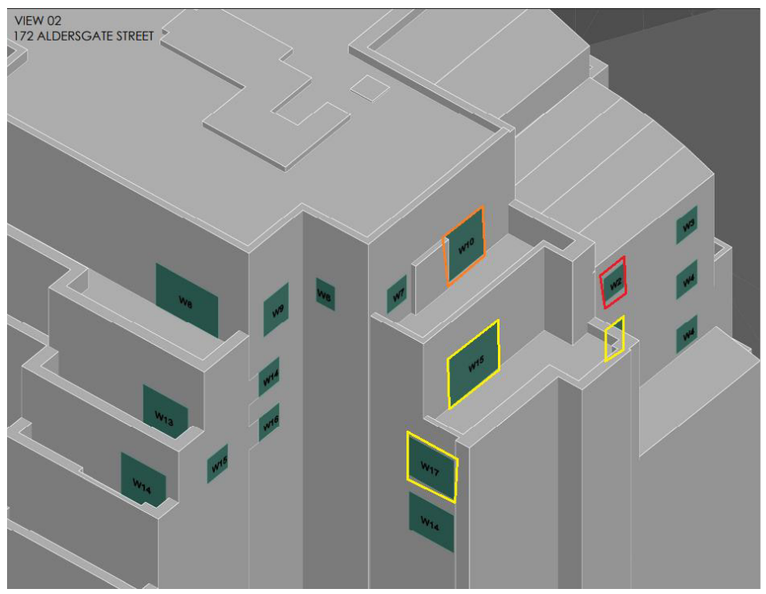
First & Second floors

London House, 172 Aldersgate Street

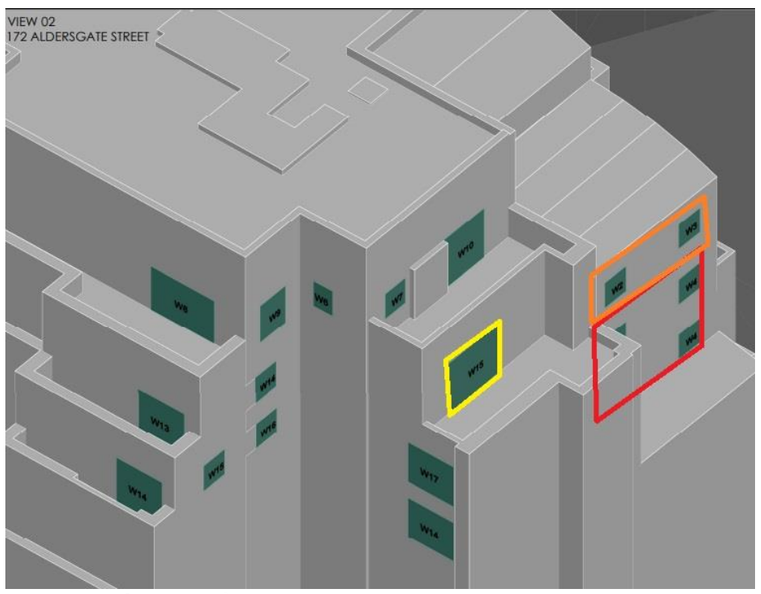
Daylight (VSC)



Daylight (NSL)



Sunlight (APSH)



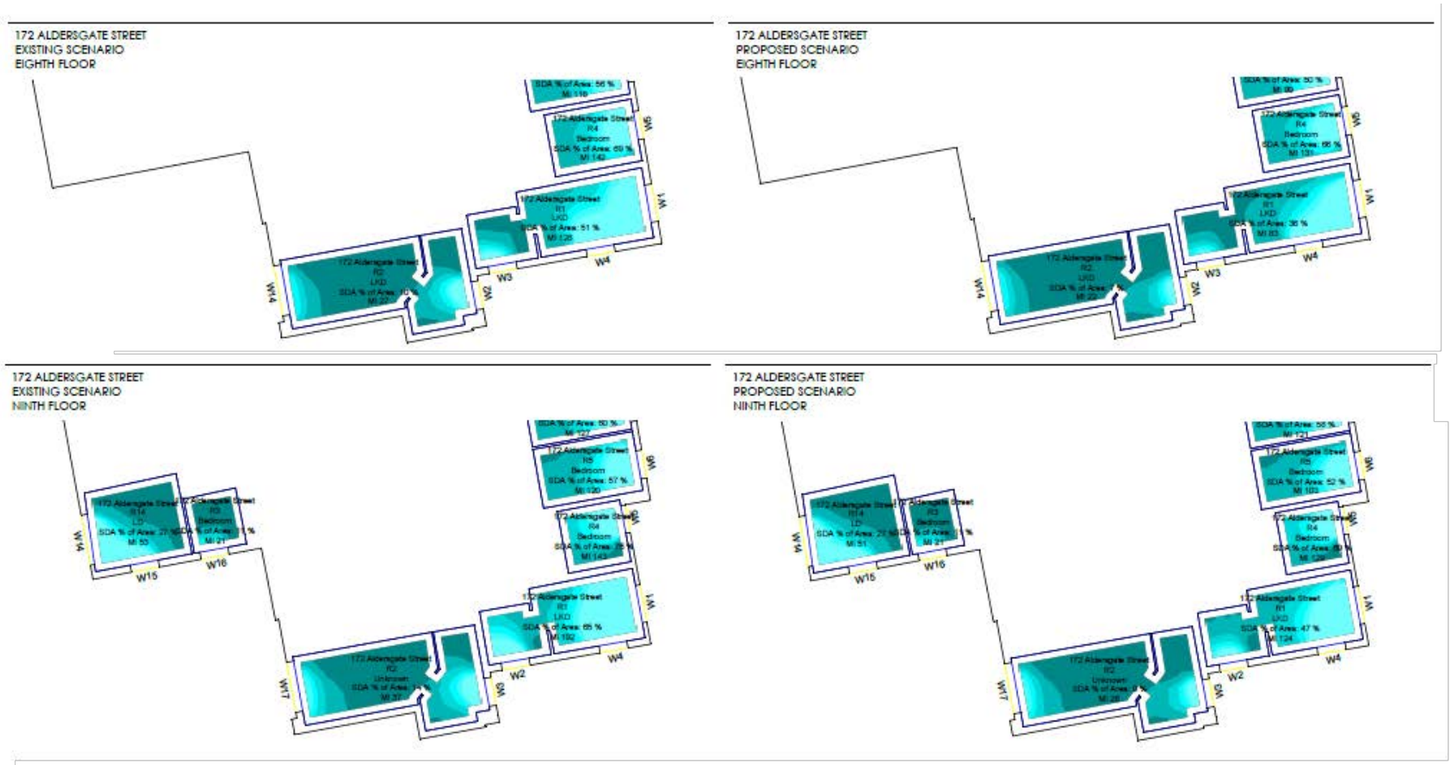
Reductions from baseline for individual windows / rooms.

- Minor adverse (20% to 30%)
- Moderate adverse (30% to 40%)
- Major Adverse (>40%)

Location

London House, 172 Aldersgate Street

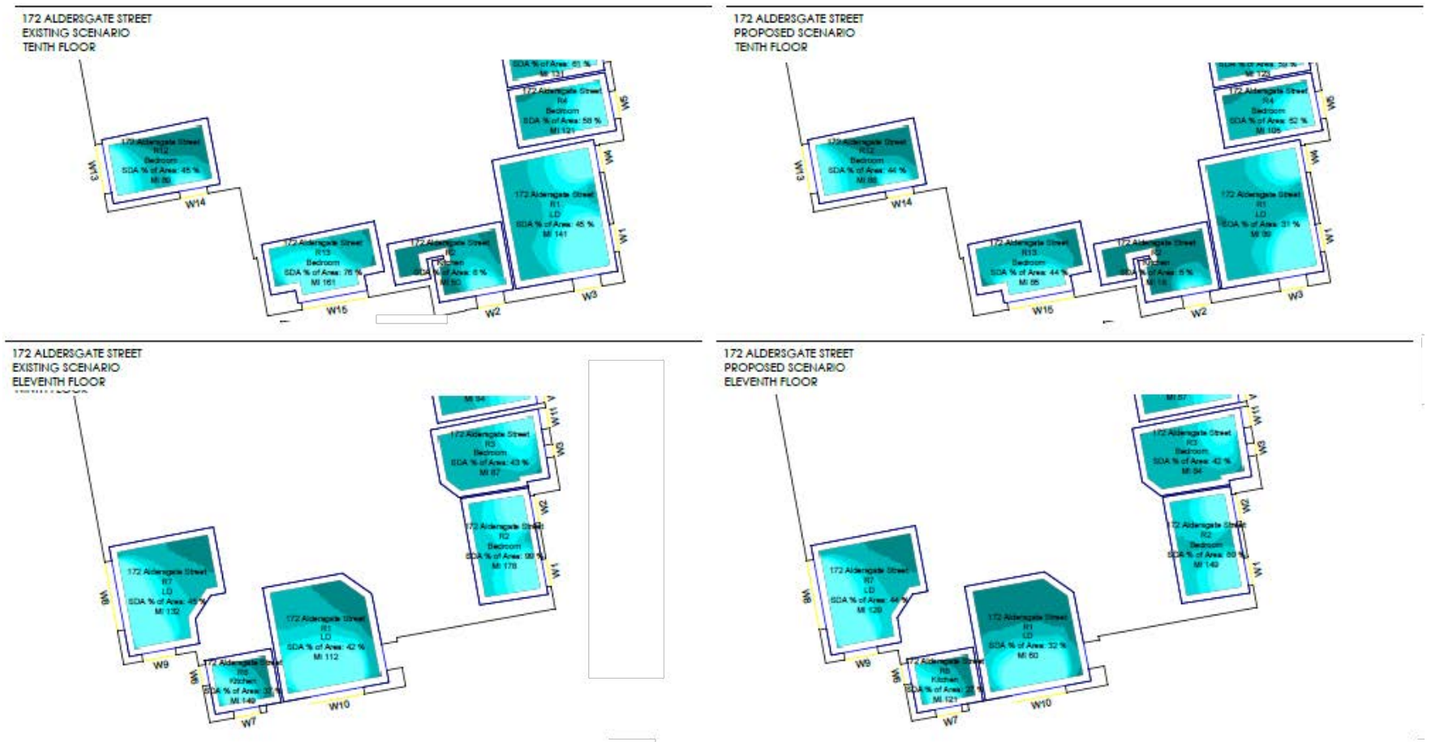
Daylight illuminance



Eighth & Ninth floors

London House, 172 Aldersgate Street

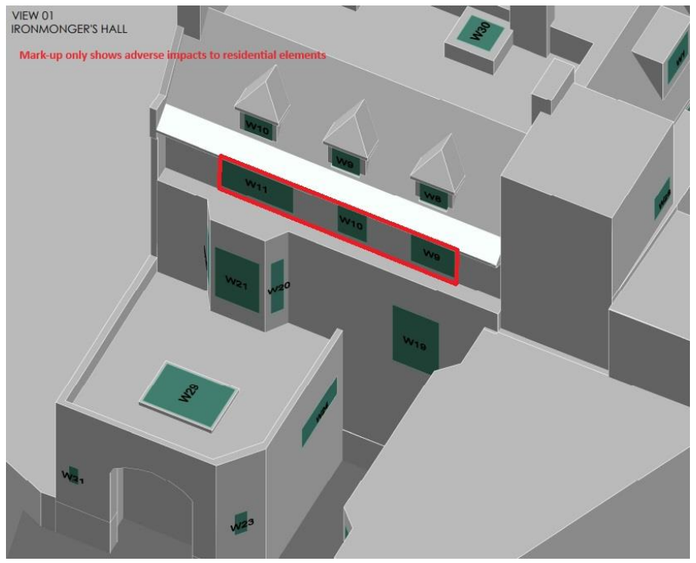
Daylight illuminance



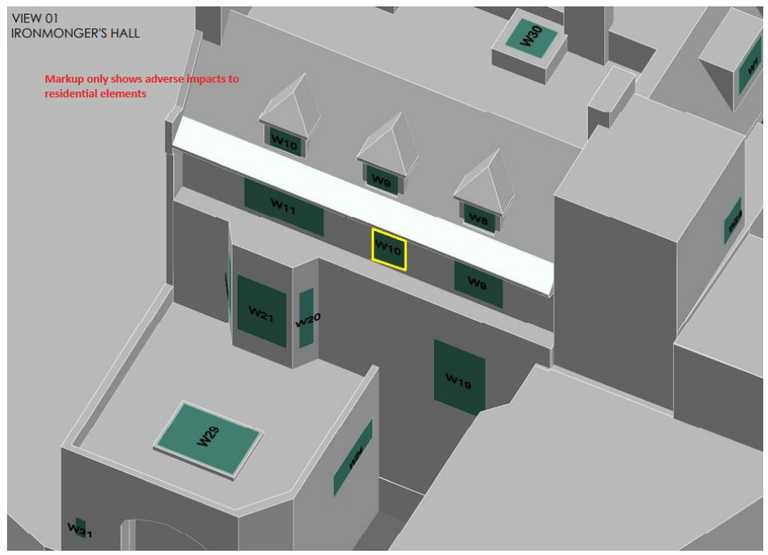
Tenth & Eleventh floors

Ironmongers Hall, Beadles Flat

Daylight (VSC)



Daylight (NSL)



Sunlight (APSH)

Reductions from baseline for individual windows / rooms.

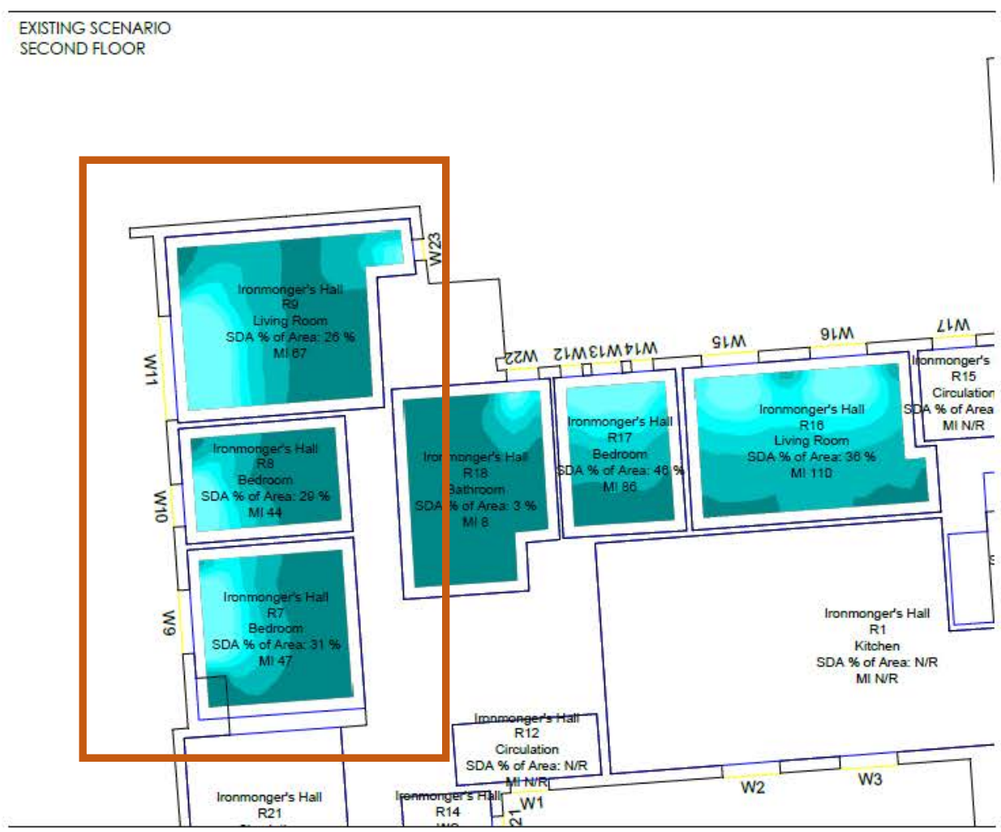
- Minor adverse (20% to 30%)
- Moderate adverse (30% to 40%)
- Major Adverse (>40%)

Location

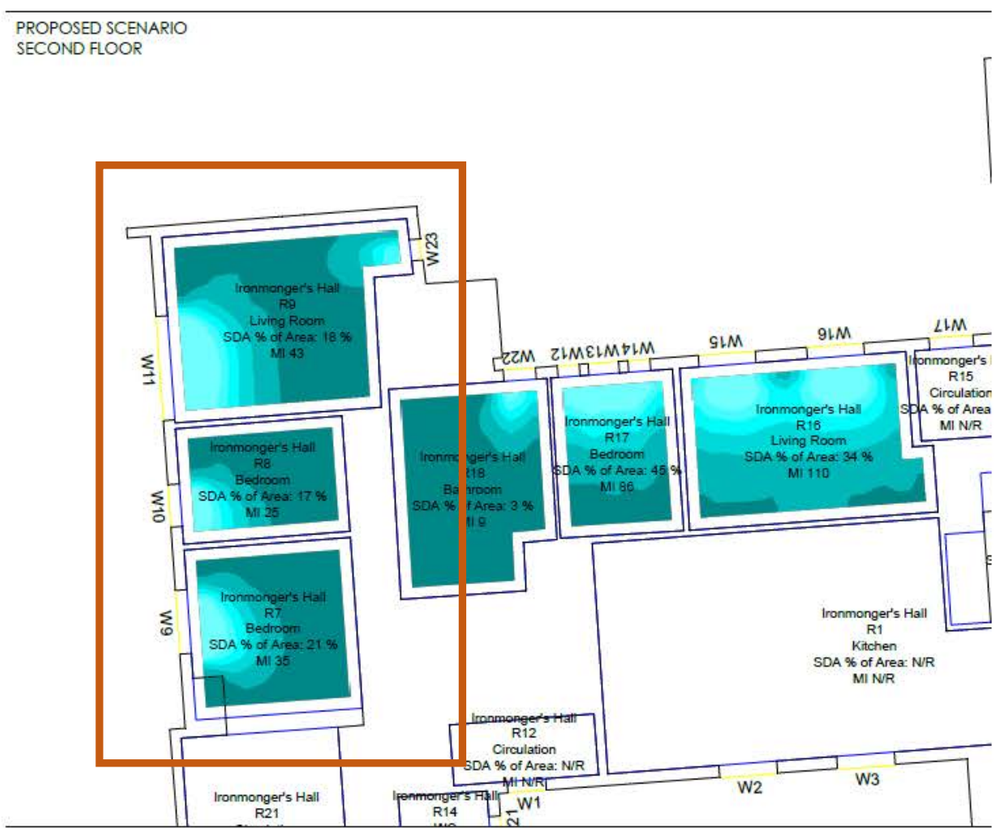
Ironmongers Hall, Beadles Flat

Daylight illuminance

EXISTING SCENARIO
SECOND FLOOR



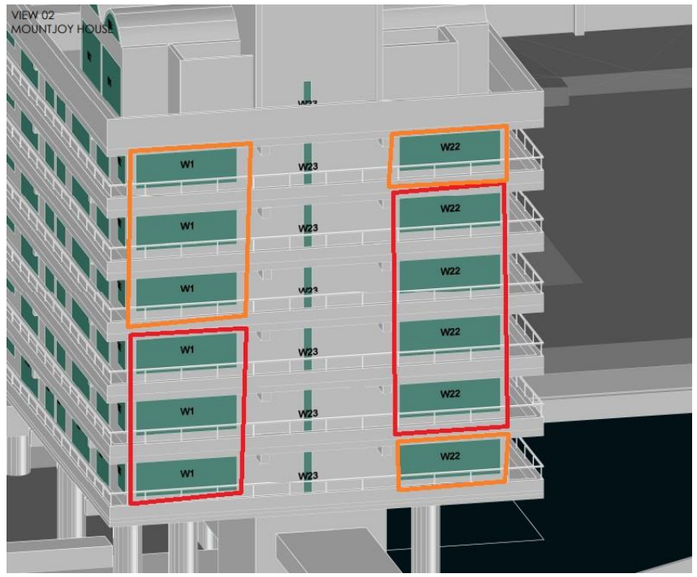
PROPOSED SCENARIO
SECOND FLOOR



Beadle's flat outlined.

Mountjoy House

Daylight (VSC)



Daylight (NSL)

Sunlight (APSH)

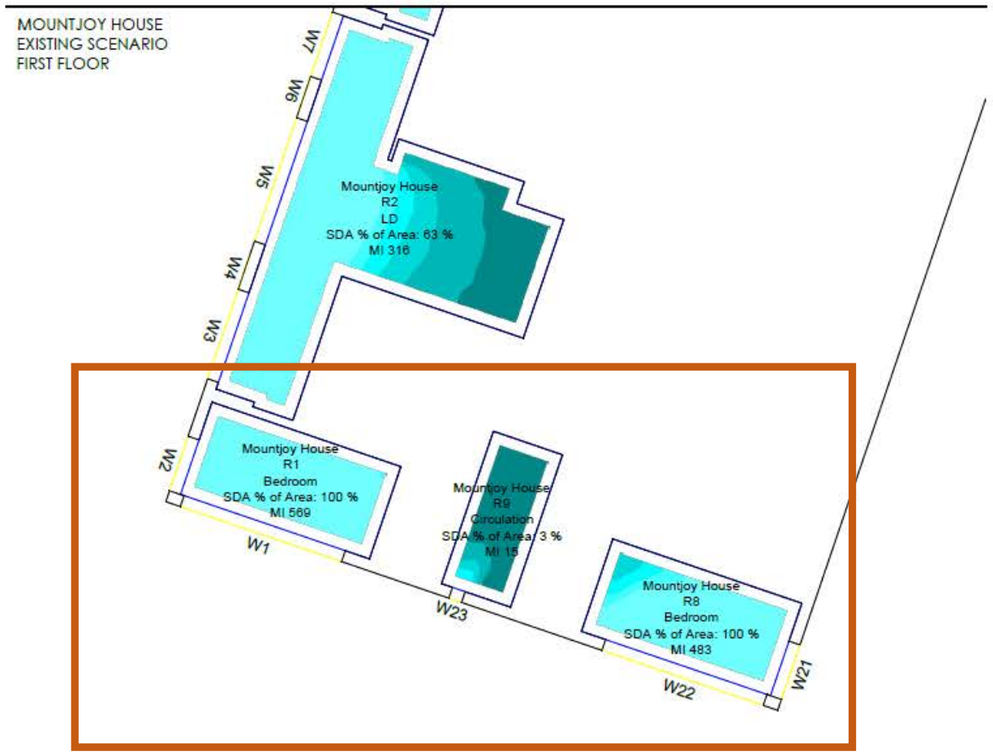
Reductions from baseline for individual windows / rooms.

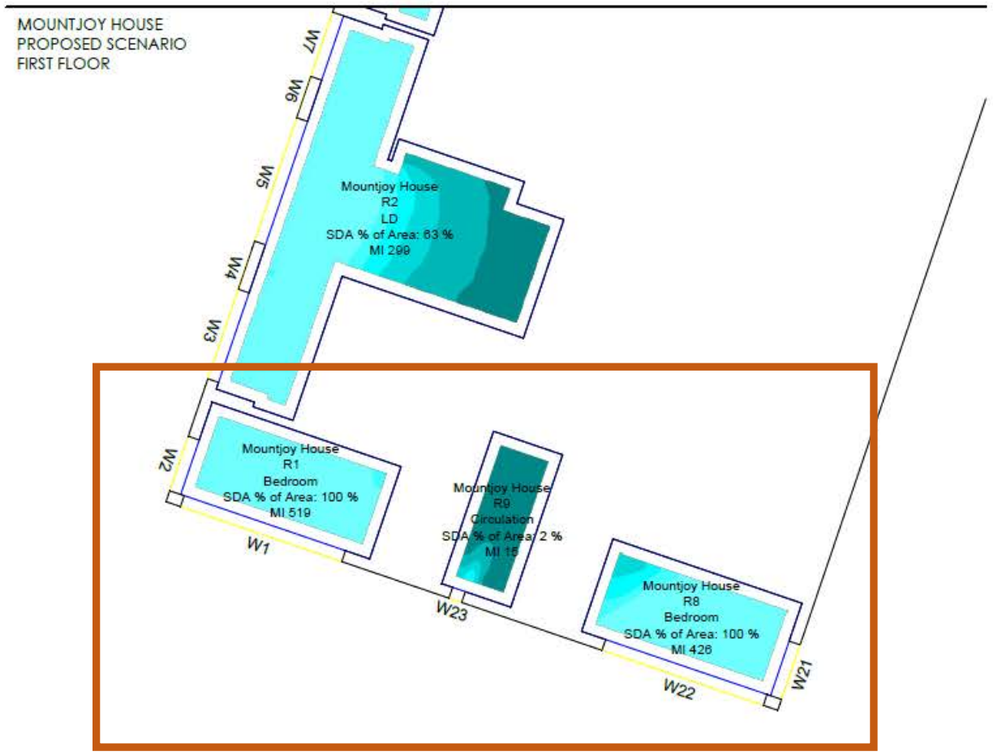
- Minor adverse (20% to 30%)
- Moderate adverse (30% to 40%)
- Major Adverse (>40%)

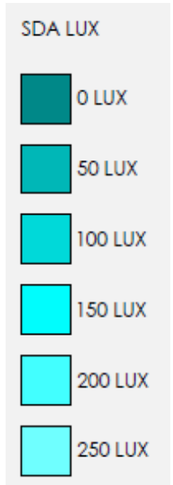
Location

Mountjoy House

Daylight illuminance





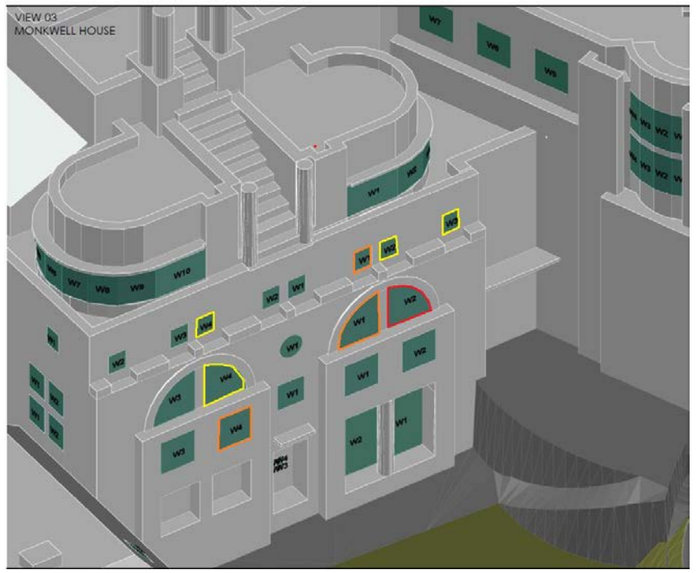


First floor shown, upper floors above show improved daylight illuminance.

2-6 Monkwell Square

Daylight (VSC)

Daylight (NSL)

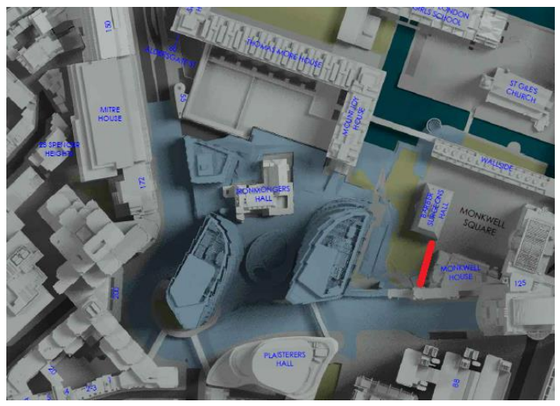


Sunlight (APSH)

Reductions from baseline for individual windows / rooms.

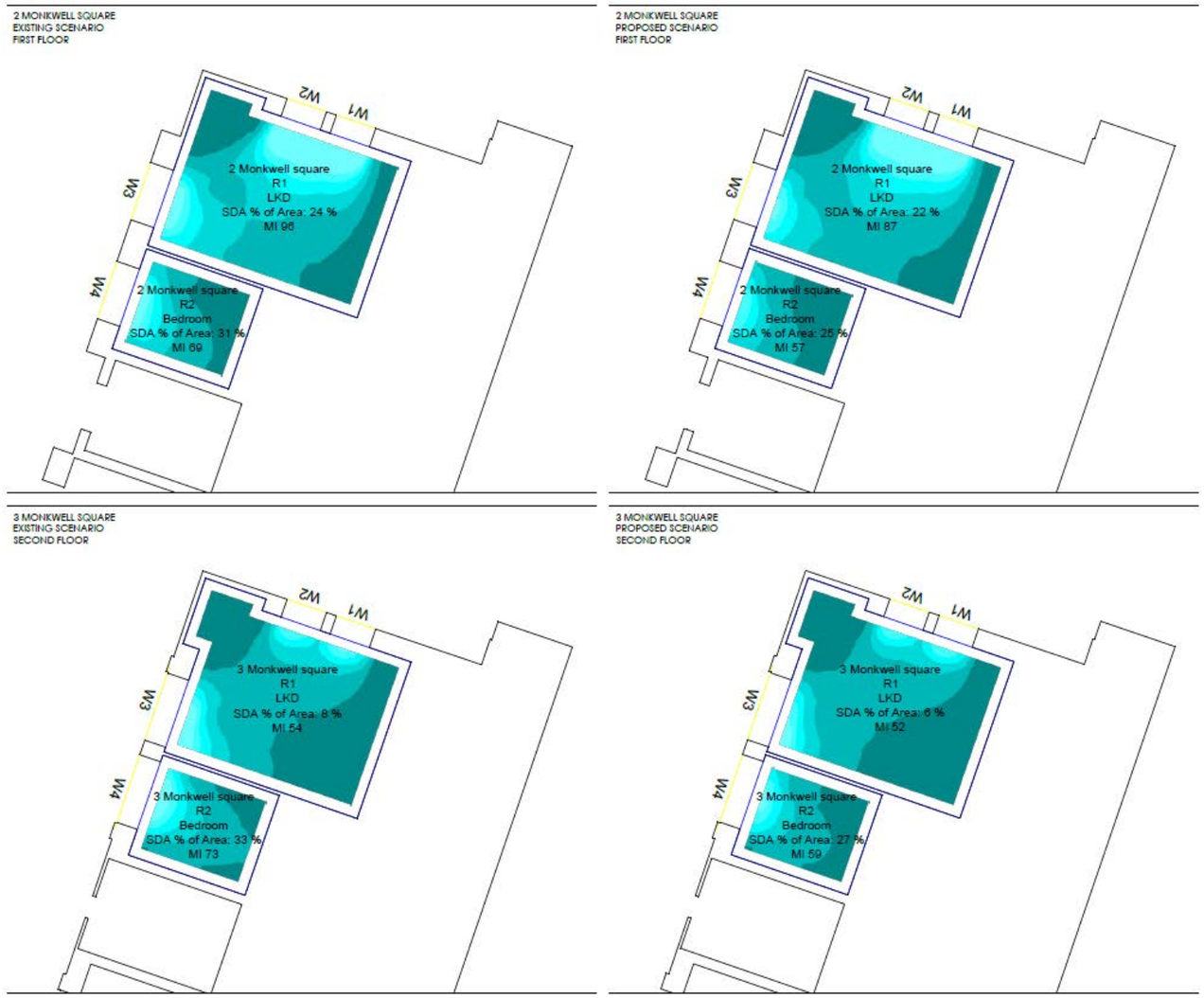
- \- Minor adverse (20% to 30%)
- \- Moderate adverse (30% to 40%)
- \- Major Adverse (>40%)

Location



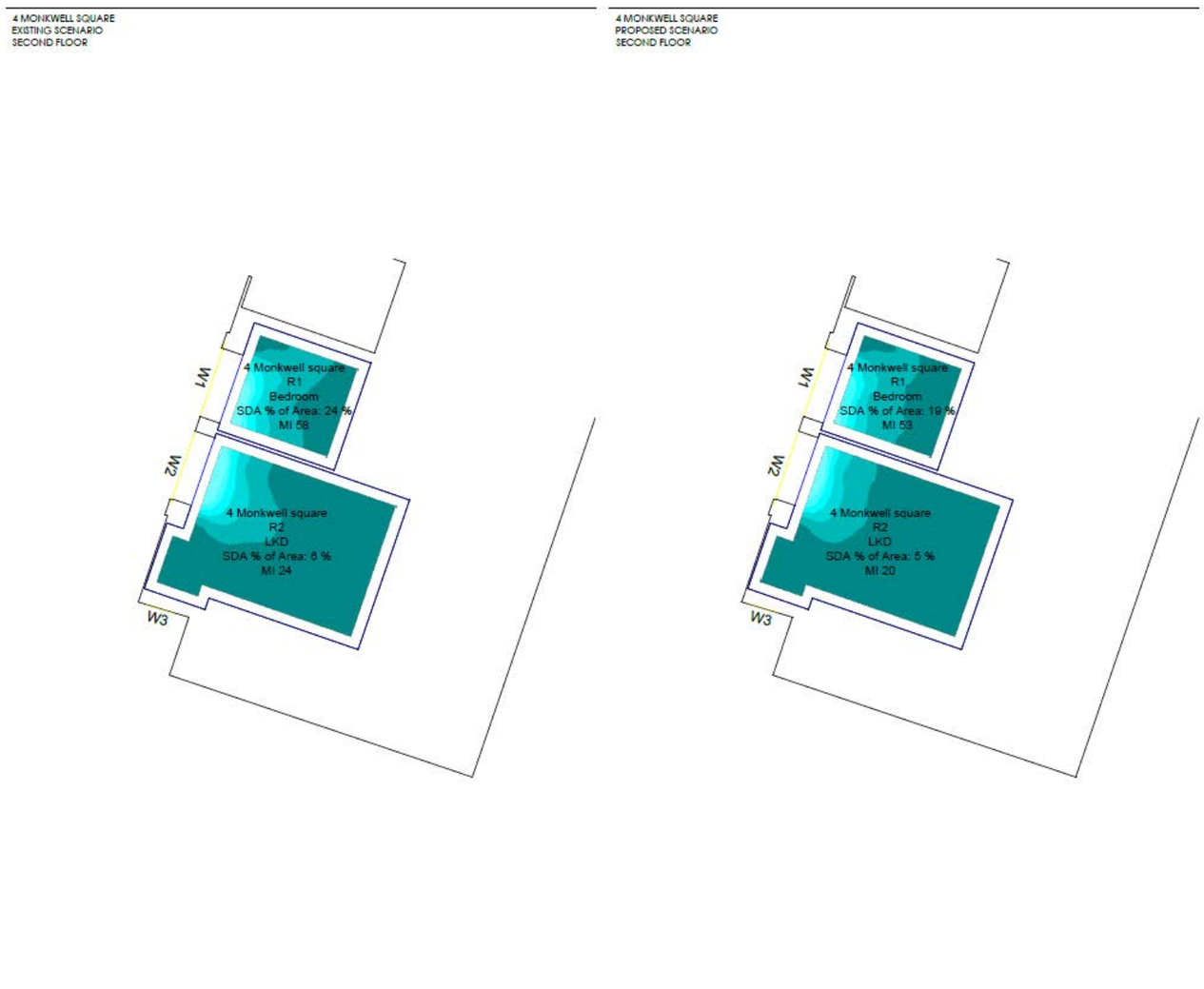
2 & 3 Monkwell Square

Daylight illuminance



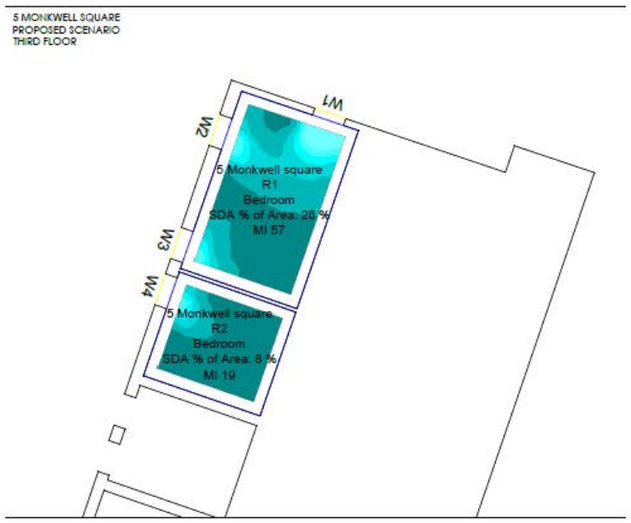
4 Monkwell Square

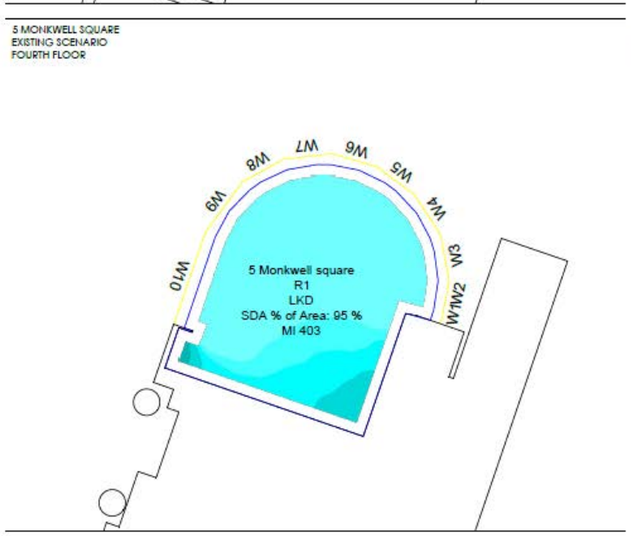
Daylight illuminance

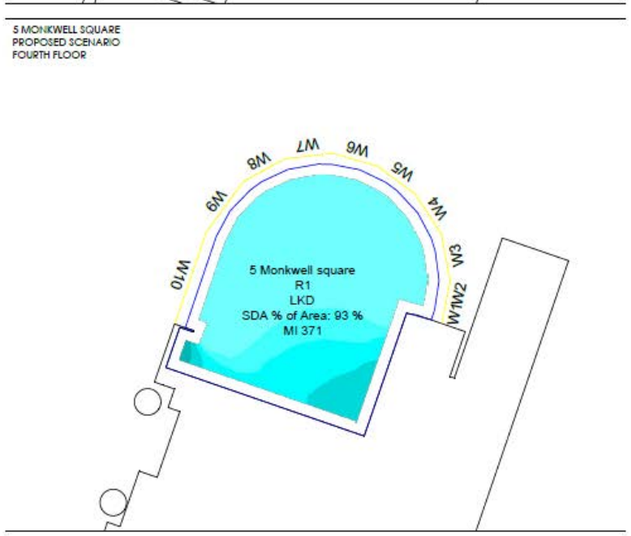


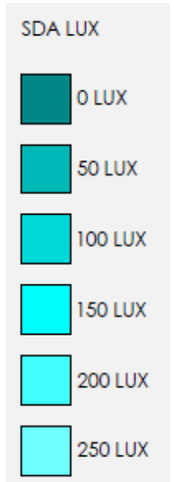
5 Monkwell Square

Daylight illuminance









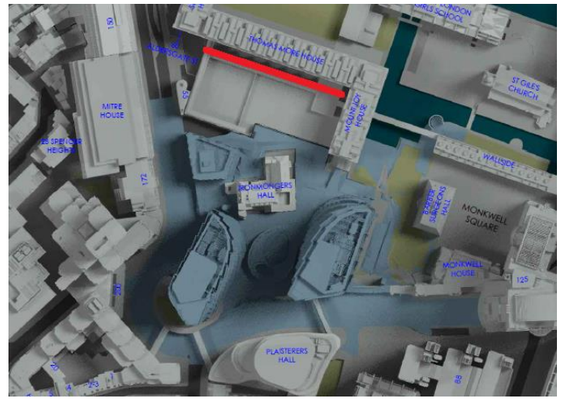
Thomas More House

Daylight (VSC)

Reductions from baseline for individual windows / rooms.

- Minor adverse (20% to 30%)
- Moderate adverse (30% to 40%)
- Major Adverse (>40%)

Location

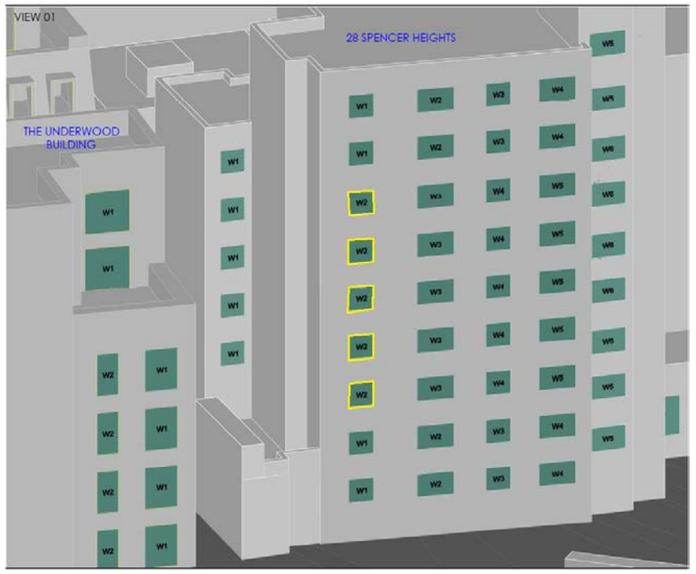


Sunlight (APSH)

Spencer Heights

Daylight (VSC)

Daylight (NSL)

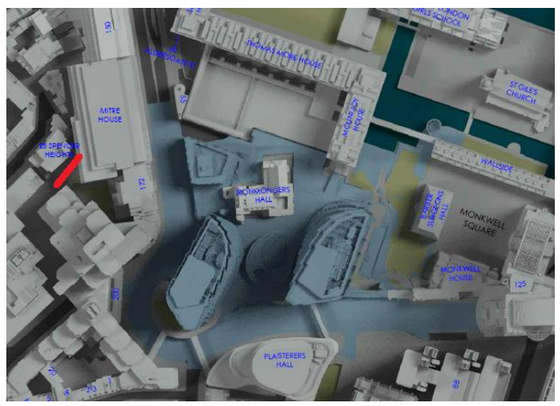


Sunlight (APSH)

Reductions from baseline for individual windows / rooms.

- Minor adverse (20% to 30%)
- Moderate adverse (30% to 40%)
- Major Adverse (>40%)

Location



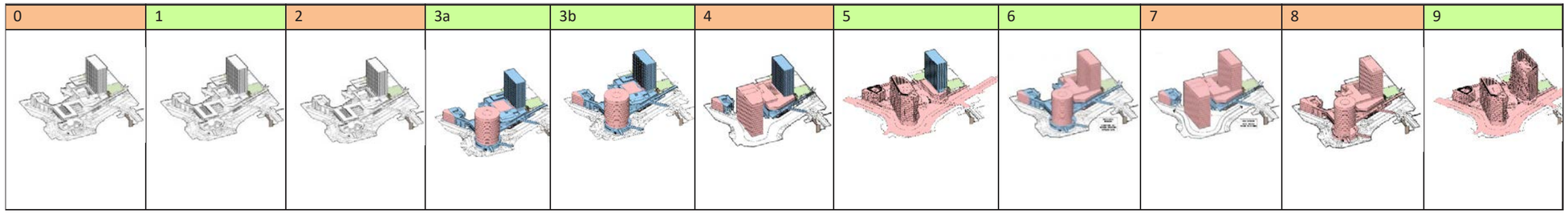
Daylight / Sunlight

Summary of impacts residential properties with impacts beyond negligible

	Daylight (VSC)	Daylight (NSL)	Daylight illuminance	Sunlight (APSH, living rooms)	Overall
172 Aldersgate Street	Negligible to moderate adverse	Negligible to Major adverse	Negligible to Minor adverse	Negligible to moderate adverse	Minor adverse, not significant
Ironmongers Hall Clerk's / Beadle's Flat	Negligible to Major adverse	Negligible to Minor adverse	Negligible to Minor adverse	Negligible to Major adverse	Moderate adverse, significant
Mountjoy House	Negligible to Major adverse	Negligible	Negligible	Negligible	Negligible to Minor adverse, not significant
Thomas More House	Minor adverse	Negligible	Negligible	Negligible	Minor adverse, not significant
2-6 Monkwell Square	Negligible	Negligible to Major adverse	Negligible to moderate adverse	Negligible	Minor adverse, not significant
Spencer Heights	Negligible	Minor adverse	Minor adverse	Negligible	Minor adverse, not significant

Sustainability Summary

The design team carefully considered the re-use of the existing buildings of the former Museum of London Building and Bastion House having regard to the City's Carbon Options Gudiance Planning Advice Note.

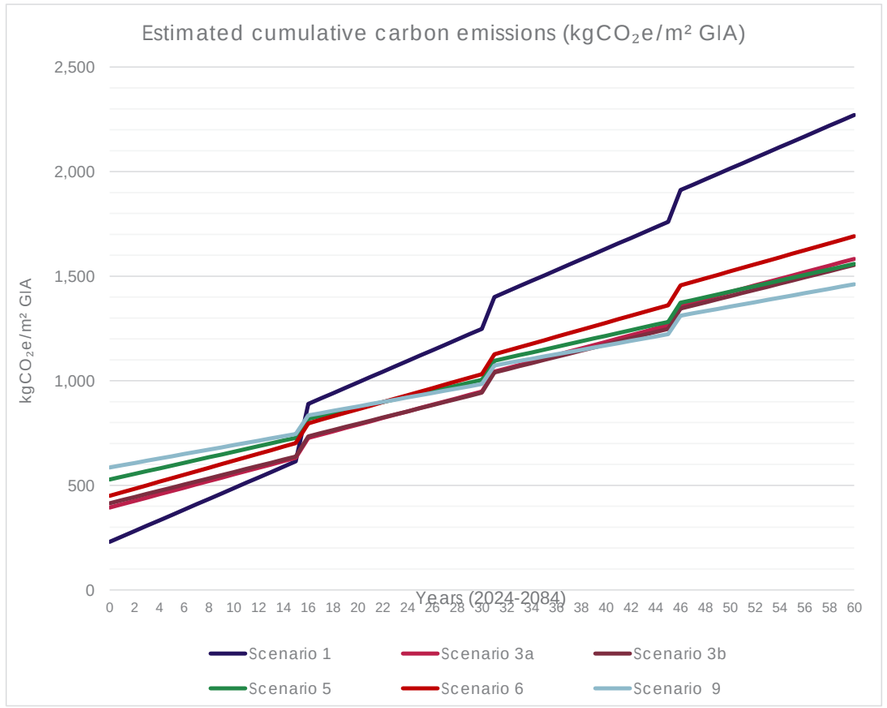


Potential Re-Use Scenarios

KEY

Scenarios selected for whole life cycle carbon analysis

Scenarios not selected for whole life cycle carbon analysis

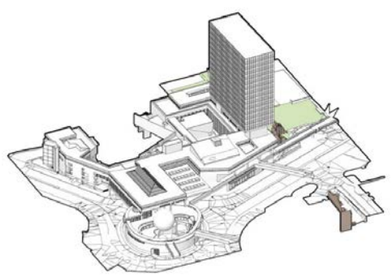


Estimated cumulative carbon emissions (kgCO₂e/m² GIA) over a 60-year period, including whole life-cycle carbon (Embodied and Operational) emissions

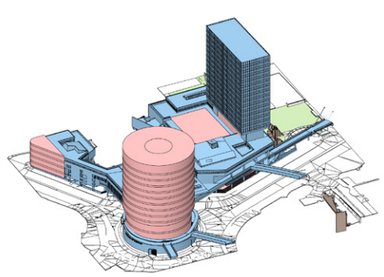
- **Scenario 1. Minor Refurbishment** which considers interventions to extend the life of the buildings considering the need to adapt the vacant Museum of London spaces and the future regulations that office spaces will need to comply with in the near future. This scenario is considered a short-term solution and a Major Refurbishment is introduced after 15 years of further operation.
- **Scenario 3a. Major Refurbishment with Extension,** retaining the Bastion House building but changing its use to hotel, retaining the former Museum of London building and proposing a new office building on the Rotunda site.
- **Scenario 3b. Major refurbishment with Extension,** retaining the Bastion House building but changing its use to residential, retaining the former Museum of London building and proposing a new office building on the Rotunda site.
- **Scenario 5. Major Redevelopment with Retention,** retaining the Bastion House building to be used as hotel and building a new Rotunda office building, a North building, a podium with cultural uses and new public realm.
- **Scenario 6. Major Refurbishment with Extension,** retaining the former Museum of London building and building a new office building on top of the Rotunda site as well as demolishing the Bastion House building to be rebuilt to the same height but with improved floor-to-floor heights.
- **Scenario 9. Full Demolition and New Build** which considers full demolition of the site and erection of two new office buildings a North building with a podium with cultural uses and new public realm.

The results showed that, whilst Scenario 9 starts at project completion with higher embodied carbon than the rest of the scenarios, at 30 years of operation, the cumulative carbon emissions equalize to the other scenarios and at 60 years it outperforms the other scenarios mainly due to the higher operational efficiency that the buildings present.

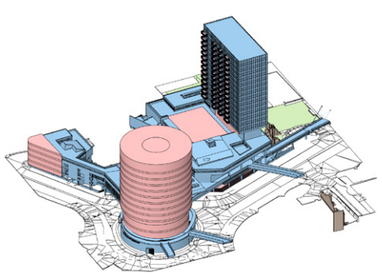
Scenario 9, a full demolition and new build, is over a 60year lifecycle and on a per sqm basis the most carbon efficient option. It further delivers on the project brief, delivering the highest quality and quantity of office space, with a transformative public realm.



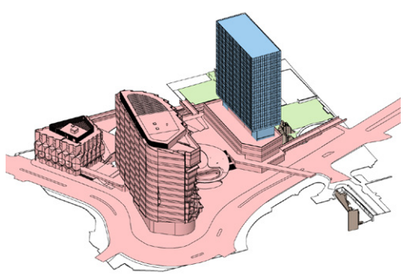
Scenario 1



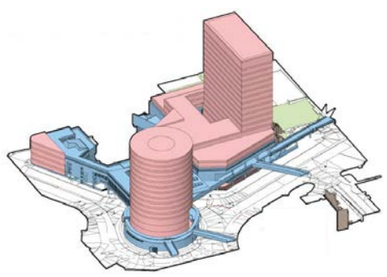
Scenario 3a



Scenario 3b



Scenario 5



Scenario 6

Scenario 9

RE-USE ASSESSMENT

The proposal is for a highly sustainable Net Zero Carbon development that is designed to comply with all the sustainability requirements of the local planning policies. Some key sustainability headlines for the project are as below. A visual summary of these measures is presented on the diagram opposite.

- **BREEAM UK NC 2018 'Outstanding'** for Office areas
  BREEAM 'Excellent' for Retail and Cultural areas
- **Enhance the capacity and efficiency of the City of London energy network with Citigen**
- **The Proposed Development Be Lean Building** (the first step of the GLA Energy Hierarchy) currently achieves 16% against Part L 2021, exceeding the GLA target of 15%. GLA Be Clean and Be Green 35% improvement target were met using Part L 2013 based on Citigen SAP 12 Carbon factors
- **Passive design measures** well-oriented buildings, fabric performance aligned with LETI targets, to achieve the new BCO 2023 solar gain target.
- **NABERS -UK Design for Performance (DfP)** approach adopted
- Innovative Structural and Mechanical, Electrical and Plumbing (MEP) design used significantly reducing embodied carbon
- **Whole Life Cycle Carbon Assessment (WLCA)** results show that the development currently achieves an upfront embodied carbon (A1-A5) of 560 kgCO_2e/m², below the GLA aspirational benchmark (600 kgCO_2e/m²) and 248 kgCO_2e/m² for modules B-C (excluding B6 and B7), below the GLA standard benchmark (450 kgCO_2e/m²)
- Water conservation with greywater & rainwater harvesting, utilization of Sustainable Urban Drainage Systems (SuDS), and recovery of Air Handling Units (AHU) condensate
- **WELL-ready targeting Platinum** to allow future tenants to certify their areas fully
- Enhancing biodiversity by achieving a minimum of 20% net gain exceeding the latest DEFRA Metric methodology.

Along delivering a Net Zero Carbon development, the aim is also to ensure that it can adapt through its useful life and can be reclaimed and reused when no longer fit for purpose

Photovoltaic panels, to generate clean on-site energy

Be LEAN

Be CLEAN

Be GREEN

The project will allocate space for Air Source Heat Pumps owned by CITIGEN at roof and basement levels to help decarbonize their grid.

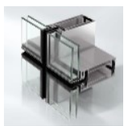
Mixed mode ventilation based on operable windows linked to central energy management system.

LED lighting with high efficacy and linked to perimeter daylight dimming

Demand control ventilation, based on room temperature and air quality (CO_2 levels), meaning less energy is used

Centralised ventilation
The main building, including office floors, will be mechanically ventilated from a centralised ventilation system. Air handling units (AHUs) are to be located in the basement and at roof level for both buildings.

Façade optimisation
The façade systems have been optimized to reduce solar gain through the reduction of glazed areas, and the integration of high thermal performance curtain wall system and solar control coating. Reducing the need for additional heating and cooling.



External solar shading to minimise the need for additional cooling, therefore reducing energy consumption and glare discomfort.

SuDS, to incorporate roof, rain garden, permeable surfacing, Greenfield discharge, Rainwater harvesting

Connection to the **CITIGEN** district heating and cooling network.

Greening, Enhancement of green planting and green spacing to increase site permeability and encourage pedestrians to use alternative routes to the roadside

SUSTAINABILITY OVERVIEW

Overview CGIs

AERIAL VIEW FROM SOUTH

NORTHERN VIEW FROM THE BARBICAN ESTATE

SOUTH APPROACH UP ST MARTIN'S LE GRAND

AERIAL VIEW OF CENTRAL PLAZA

CENTRAL PLAZA

THE GLADE

NORTHERN GARDEN - PROPOSED

BARBER SURGEON'S GARDEN

ROMAN GATE VIEWING AREA